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ABSTRACT

This document presents the master plan for Florida postsecondary education, with recommendations in the areas of access, interdependence, outcomes, and funding. An introduction offers a vision statement for postsecondary education in the state, reviews the planning process, identifies underlying principles, and explains the planning context. The section on access presents 20 recommendations concerning access, productivity, and technology. Next, the section on interdependence offers 17 recommendations which address preparation for postsecondary education, educational partnerships, and the preparation of teachers. The 14 recommendations in the section about postsecondary education outcomes focus on workforce preparation and economic development. The section on funding proposes 14 recommendations addressing the following areas: accountability/performance funding, funding for instruction and research, public education capital outlay, tuition and financial aid, and support for the independent sector. The concluding section reviews 10 broad goals. Appended materials include a list of planning commission members and staff, and exhibits which present further detail in support of each of the document's main sections. (DB)

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ED 423 801

Challenges and Choices:

The Master Plan for Florida Postsecondary Education

Report and Recommendations by
The Florida Postsecondary
Education Planning Commission

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January 1998

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Challenges and Choices

The 1998 Master Plan for Florida Postsecondary Education

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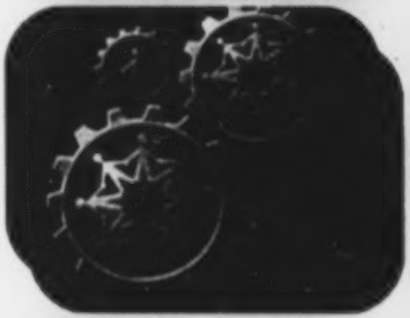

Chairmen's Letter

January 23, 1998

Dear Floridians:

The Postsecondary Education Planning Commission developed ***Challenges and Choices: The Master Plan for Florida Postsecondary Education*** in accordance with Section 240.147(2), Florida Statutes, which directs the Commission to "prepare and submit to the State Board of Education a master plan for postsecondary education." This ***Master Plan*** will serve as the basis for the strategic planning efforts of our public and independent postsecondary education sectors, and their active involvement throughout the development of ***Challenges and Choices*** is greatly appreciated. The Commission adopted ***Challenges and Choices*** on January 23, 1998.

While building on previous master planning efforts, this plan focuses on propelling Florida into the next millennium where the intellectual resources of the populace will determine the economic and social well-being of the State. To raise the educational attainment of the citizenry, all available resources must be fully used and integrated. Limitations and constraints on the educational delivery system must be reviewed and, where appropriate, redefined. Missions need to reflect the strengths of institutions and portray the students, industries, and communities they serve while collectively meeting state needs and reflecting a cost effective use of state resources.

This plan focuses on propelling Florida into the next millennium where the intellectual resources of the populace will determine the economic and social well-being of the State.

The goal to raise the educational attainment of the citizenry is laid before the State as the number of high school graduates surges, the diversity of students increases, while conversely, the ability to demonstrate preparation for college work decreases, and the demand for new skills in workers expands. These additional challenges amplify the importance of interdependence in preparing all students for employment and lifelong learning, employing varied teaching techniques to reach all learning styles, and improving teacher education.

Preparing Floridians for knowledge-based employment in the next century is fundamental to the future well-being of the State. Postsecondary education as it exists today cannot fully respond to this challenge without an increased focus on degree completion. Increasing access to degree completion will require strong collaboration, cooperation, and support from government, public and independent education, and business/industry in Florida. Not one of the issues addressed in ***Challenges and Choices*** is without cost, and a fair investment by all involved will be required. The choices made today will determine what Florida will be tomorrow. The Commission believes that the leaders and citizens of Florida will recognize the present challenges facing the State and will choose the path to a stronger future.

The Commission believes that the leaders and citizens of Florida will recognize the present challenges facing the State and will choose the path to a stronger future.

During the past 15 months, the Commission received information from citizens throughout the State and worked diligently to ensure that the ***Plan*** reflects the future needs of Florida. ***Challenges and Choices*** is the result of this work, and we are available to discuss it with you.

Sincerely,

Ivie R. Burch

Ivie R. Burch, Chairman
Postsecondary Education Planning Commission

Robert A Bryan

Robert A. Bryan, Ph.D., Chairman
Master Plan Committee

Over the past 15 months, the Commission has been working on the development of the ***Challenges and Choices: The Master Plan for Florida Postsecondary Education***. This represents the third iteration since the original ***Master Plan*** published in 1983. ***Challenges and Choices*** will serve as the basis for strategic plans to be developed by the State Board of Community Colleges, the Board of Regents, and the Independent Colleges and Universities of Florida.

This ***Master Plan*** is designed to provide an in-depth representation of the advice, research, testimony, and discussion that took place during the planning process. Included are an overview of the ***Plan's*** development, a description of the state's demographic, social and economic context, identification and documentation of the major challenges addressed by the ***Plan***, and specific strategies for dealing with these challenges. Throughout the process, the Commission was guided by the vision developed for the 1993 ***Master Plan***:

Vision

Postsecondary Education must provide an environment in which individuals are able to develop their capabilities to the fullest--as lifelong learners, workers, citizens, and members of families and other social institutions. More specifically, a postsecondary education system must provide Floridians with the ability to acquire an increased cultural, historic, and scientific knowledge base; technical skills appropriate to both current and emerging employment opportunities; and an understanding and appreciation of the multicultural nature of society in our increasingly interdependent world. In providing these services, postsecondary institutions must be responsive to Florida's rapidly changing social and economic needs, including taking actions to optimize the use of the resources that will be available to support those institutions in the future.

Planning Process

In preparation for development of the 1998 ***Master Plan***, the Commission identified a group of key leaders representative of the beneficiaries of postsecondary education. To obtain a broad perspective, emphasis was placed on persons outside of the postsecondary education community. Among the entities represented were government, business and industry, health care, social work, and education. As the ***Plan*** developed, opportunities were provided through public hearings and other means for input from individuals in all educational sectors as well as other interested persons.

The individuals contacted by the Commission in the Spring of 1997 were asked to comment on the following issues:

1. What are the strengths and weaknesses of our current system of postsecondary education?
2. What changes are required?
3. How can the system make greater contributions to the citizens of our state?
4. What issues, educational or otherwise, have paramount importance as Florida moves toward the next century?

Following this initial step, issue papers were prepared by staff for Commission review and discussion. Three major areas--**Access, Outcomes, Funding**--were selected initially as the focus of the ***Plan***. A series of joint hearings were held in cooperation with the sectors in May, June, and July at which testimony related to the major issues identified was received and discussed by members of the Commission, the Board of Regents, the State Board of Community Colleges, and the Independent Colleges and Universities of Florida. During these discussions, a fourth area, **Interdependence--A Seamless System**, was identified as a priority as well. The product of these efforts follows.

Underlying Principles

The Commission adopted the following principles as a template for ***Challenges and Choices***.

Florida's postsecondary education system shall:

- be student/customer focused;
- meet rising student demand while increasing program and degree completion and maintaining standards of excellence;
- be cost effective;
- use fully all providers and modes of delivery;
- require a fair investment by all beneficiaries--students, the state and local community, business and industry; and,
- reward excellence in operation and results.

Planning Context

Economic and Social Characteristics

Florida, rightfully, has placed a great deal of importance on postsecondary education. As educational levels increase, income increases, while conversely, poverty decreases, unemployment decreases, and the probability of going to prison decreases. In short, higher educational levels mean a higher standard of living, while lower educational levels mean just the opposite. As Pascarella and Terenzini have declared:

> *Social Mobility, as defined by changes in occupational status and income, is inextricably linked to postsecondary education in modern American society. Indeed, a bachelor's degree has often been referred to as a passport to the American Middle class. (1991, p. 269)*

Floridians receive fewer such "passports" to the middle class. A closer look at attainment by race/ethnicity provides evidence of an educational attainment gap in Florida. For example, Exhibit A-1, Racial/Ethnic Percentage Distribution, 1994-95, reports the percentage share of degrees earned by blacks in 1994-95. While blacks account for 20 percent of high school diplomas, they account for a substantially smaller portion of postsecondary degrees.

Blacks account for 20 percent of high school diplomas; they account for a substantially smaller portion of postsecondary degrees.

Again, an examination of educational attainment in relation to data on income inequality outlines per capita income differences for the white and black population of 14 large (and southern) states, as well as the dollar and percentage difference. Disturbingly, Florida stands out as having the largest income gap between the races. Six of the seven states with the largest income gap have the lowest baccalaureate degree completion rates, Exhibit A-2 (Enrollment, Institutions, and Degrees Granted At Four-Year Institutions Per 100,000 18 To 44 Year Old Population, 1994-95).

Income Equality

Difference between White and Black Per Capita Income, Selected States

	Difference		Per Capita Income	
	Dollars	Percent		
	White/Black	White/Black	*White*	*Black*
Florida	$8,592	218 %	**$15,878**	**$7,286**
New York	8,220	[illegible]	18,391	10,171
Illinois	7,942	[illegible]	16,639	8,697
Georgia	7,868	[illegible]	15,672	7,804
California	7,618	[illegible]	18,820	11,202
Texas	6,600	[illegible]	14,488	7,888
North Carolina	6,569	[illegible]	14,209	7,640
Michigan	5,905	[illegible]	14,950	9,045
Wisconsin	5,751	[illegible]	13,639	7,888
Pennsylvania	[illegible]	[illegible]	14,507	8,845
Washington	5,511	[illegible]	15,409	9,898
Ohio	5,396	[illegible]	13,920	8,524
Indiana	4,882	157	13,397	8,515
West Virginia	3,283	146 %	10,475	7,192

**Sorted from largest to smallest dollar gap.*
Source: U.S. Census Bureau.

Florida stands out as having the largest income gap between the races.

The Commission on Government Accountability to the People's (GAP) report, ***Critical Benchmark Goals***, indicates that the average wage in Florida lags behind the U.S. average (by 11 percentage points), yet the per capita income is slightly above the national average, due in part to the income of our large retirement population. While gaps in income are intriguing yardsticks to gauge economic opportunity and progress directly, other social indicators should also be considered. Two such indicators of societal impacts reported by GAP are the violent crime rate and percent of citizens living in poverty. Florida performs poorly on both measures. As of 1994, no other state had a higher rate of violent crime than Florida. Only 12 other states have a higher percentage of people living in poverty. These two social conditions are indirect reflections of Florida's higher educational attainment levels.

As of 1994, no other state had a higher rate of violent crime than Florida.

According to many experts, the most vulnerable portion of the population is the children of Florida's working age population. For example, the Annie E. Casey Foundation, a private Baltimore charity, ranks Florida 48th in the health and welfare of its children. This ranking is a composite of ten different indicators, including percentage of children in poverty, infant mortality rate, juvenile violent crime rate, and child death rates. The foundation further states that the ranking is indirectly related to educational opportunity and degree attainment.

The levels and effects of educational attainment are inherently linked to one another as success at one level increases the chances of success in the other. Data show that parents' educational level is a good predictor of a student's educational preparation level. Parents who do not complete their education are more likely to have children who do not complete their education. As a result of this interdependence, a cycle is created which serves to reinforce itself generation after generation.

The Recent Past and the Present

From 1950 to 1970, national and international economies were changing, there was a massive shift of population and jobs to the southern United States, and the "baby-boomers" were coming of age. During this period, the State of Florida added more than four million residents, and annual high school graduates increased by over 55,000.

The state responded to this population growth by providing opportunities for an additional 200,000 postsecondary students through the creation of five public universities and 23 public community colleges.

From 1970-1990, Florida grew by six million residents, and the annual high school class size increased by 17,000 graduates. The effect on higher education was enormous. From 1970-1990, there was an increase of 350,000 students, which was an average of an additional 17,500 college students per year. This is the equivalent of adding Florida A & M University, Rollins College, Eckerd College, and Stetson University every year for 20 years!

From 1970-1990, there was an increase of 350,000 college students, which was an average of an additional 17,500 college students per year.

Florida Population Growth And Higher Education

Year	Population	High School Graduates	Higher Education Enrollment	Public Universities	Public Community Colleges
1950	2,771,000	16,845	30,000	3	4
1970	6,789,443	71,900	235,525	8	27
1990	12,937,926	86,162	588,923	9	28
2010**	17,824,739	136,208	888,141	10	28

**1950 higher education enrollment is estimated.* ***2010 data is projected.*

***Source:** U.S. Census; Department of Education.*

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Challenges and Choices

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One result of rapidly increasing enrollment is that Florida's public colleges and universities are twice as large as the national average (Exhibit A-3 & Exhibit A-4, Distribution of Enrollment in Public Institutions of Higher Education). Florida has 1.22 public and private four-year institutions per 100,000 18-44-year-old population. In comparison, California has 1.37, Texas 1.24, and Ohio 2.03. Studies on institutional characteristics affecting educational attainment have revealed that institutional size has negative indirect effect on attainment by lessening student integration and involvement with peers and faculty.

The Future

Four decades after the postwar growth of the 1950s, Florida again faces a strikingly similar set of circumstances. Beginning in 1990 and ending in 2010, the Bureau of Economic and Business Research (BEBR) at the University of Florida is projecting an increase of nearly five million residents. The population growth of college-age students will be fundamentally different than the growth of the last 15 years (Exhibit A-5, Florida Population Growth, 1985-2010--Projected). Overall, while the 18-44-year-old cohort will grow by 5.2 percent between 1995 and 2010, the 25-44 portion will actually decrease, and the number of 18-24-year-olds will grow by nearly 30 percent! Current Department of Education projections (December 1997) indicate that, based on current graduation rates, in 2010 there will be 36,499 more annual high school graduates than in 1995, a 40 percent increase.

Four decades after the postwar growth of the '50s, Florida again faces a strikingly similar set of circumstances.

The impact of these demographic changes on postsecondary enrollments will be profound. Projections by the Commission indicate that by 2010 there will be in excess of 200,000 additional college credit students enrolled in the state's institutions of higher education. Postsecondary sectors and institutions are not prepared for the projected increase in enrollments. For example, the State University System opened Florida Gulf Coast University (FGCU) in the Fall of 1997 with an enrollment of 2,538 and projects enrollment in the Fall of 2003 to be approximately 10,000 students. This represents, however, less than five percent of the expected increase in college students.

Challenges and Choices *provides an update of the condition of Florida postsecondary education by focusing on Access, Interdependance, Outcomes, and Funding.*

At the same time that Florida is facing large increases in student demand for access, the State recognizes that its degree production rate is below the national average. In terms of degree completions and educational output, Exhibit A-6, Baccalaureate Degrees Granted Per 100,000 18-44-Year-Old Population, reports that Florida is 78.8 percent of the national average in baccalaureate degree production per 18-44-year-old population (1994-95). ***Criteria for the Establishment of New Public Colleges and Universities***, a study completed by the Commission in 1991, concluded that "this [Florida's baccalaureate degree production and ranking] level of performance will not be adequate for the state and its citizens to meet their economic goals."

Challenges and Choices provides an update of the condition of Florida postsecondary education by focusing on Access, Interdependence, Outcomes, and Funding. Recommendations in each of these areas provide direction to the State as it faces the challenges of a new century.

Introduction

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The Commission recognizes that the citizens and leadership of Florida expect postsecondary education to operate and increase its productivity in an environment of contradictory conditions. The demand for postsecondary education is facing explosive growth caused both by increasing numbers of students graduating from the state's high schools and by the market demand of a highly competitive, global, post-industrial economy. The economy is increasingly based on information, service, and technology industries that require highly trained individuals, both for job entry and throughout their work life.

The citizens and leadership of Florida expect postsecondary education to operate and increase its productivity in an environment of contradictory conditions.

As student and market demand for postsecondary education soars, fiscal resources are constrained. Postsecondary education faces the long-term phenomenon of costs rising faster than revenues, limitations on the tax base, and a stable or declining share of general revenue. Although some of the rising costs are a function of its labor intensity, the transformation of postsecondary education institutions into institutions offering comprehensive and extensive programs and services has significant fiscal impact. Drifting away from a fundamental mission toward a broad mission contributes to increasing costs, but not necessarily to higher productivity; i.e., graduates prepared for the workforce and research that enhances economic development.

In an environment of limited fiscal and human resources, no single higher education institution can meet all of the current and emerging needs of society. An efficient, effective, and quality system of postsecondary education is one in which individual institutions devote their resources to addressing distinctive needs.

Goal

Florida postsecondary institutions must focus on their individual strengths while enabling the system as a whole to adjust to the demands of the new economy.

Recommendation:

Each institution, with appropriate direction from governing and coordinating boards, should identify its distinctive mission and focus its resources on its strengths and priorities. The roles of different institutions should be coordinated so that, taken together, they meet important state needs and reflect a cost effective use of state resources.

Enrollment in Florida higher education has grown significantly over the past few decades. Between 1970 and 1995, total statewide headcount enrollment (including the state universities, community colleges, and private institutions) increased by nearly 400,000, from 235,525 to 629,395 students.

Projections are that the total statewide headcount enrollment in 2010 will increase +41% over 1995 levels.

This significant growth is expected to continue. Projections are that the total statewide headcount enrollment in 2010 will be 888,141, an increase of 258,746 (+41 percent) over 1995 levels (Appendix B).

Goal

Florida must provide increased opportunities for access to higher education.

Though Florida's higher education institutions have been able to accommodate growth in the past, the future will most certainly require innovative ways to serve these increased demands. Florida Gulf Coast University, opened in the Fall of 1997, is the first new public institution in our state in over 25 years. Our public community colleges and state universities serve very large enrollments when compared to other states. Unlike other states, Florida relies heavily on its 2 + 2 structure (community colleges and state universities) to meet the access needs of its citizens. In addition, our university system has grown in mission and scope to be somewhat similar to the University of California model. Board of Regents staff estimate that six of the nine universities in operation prior to this year will be classified as Carnegie Research I or Research II in 1998. Public four-year baccalaureate institutions are missing in Florida, institutions which serve to provide access in other states. The advantages of a "state college system" for providing access versus a "research university model" are lower operating costs, increased emphasis on faculty teaching, a primary focus on undergraduate education, and a limited institutional mission without doctoral programs or a heavy concentration on research.

Public four-year baccalaureate institutions are missing in Florida, institutions which serve to provide access in other states.

The Commission recognizes that the State must provide additional capacity in higher education and is interested in expanding the ability of students to obtain baccalaureate degrees offered at one location (lessening the need for a student to enroll at a different location to complete a degree). With these considerations in mind, the Commission has identified the following responses to meet the future postsecondary access needs in our state:

- ***Increase enrollment at each existing SUS institution.*** This response would simply accommodate a significant portion of the projected enrollment growth by allowing growth at the ten existing universities.

- ***Establish a state college system.*** This response would entail the establishment of a "middle tier" system of public colleges in Florida that would focus solely on the provision of baccalaureate-level instruction.

- ***Authorize community colleges to offer selected baccalaureate degrees.*** This response would add upper-level instruction at the community colleges in selected fields leading to the baccalaureate.

- ***Increase the number of joint-use facilities at community colleges and state universities.*** This response would involve the establishment of additional "joint-use facilities" at community colleges and state universities that would allow students to take both community college and state university courses on site. There are two variations of this response. The first would be based on existing funding and workload practices. The second "modified" version would rely on funding and faculty workload associated with undergraduate teaching institutions.

- ***Increase the state subsidy to in-state students attending Florida private institutions.*** This response would entail an increase in the Florida Resident Access Grant (FRAG) from its current level ($1,600 per year) to encourage more Florida residents to attend in-state private institutions.

- ***Increase the use of distance learning and instructional technology.*** This response would seek to increase access to higher education via expanded use of distance learning and instructional technology.

The term "response" rather than "option" has been specifically used here because these are clearly not mutually exclusive ways of addressing the projected enrollment growth. In fact, no single response is likely to be adequate to meet the need. The State will need to use a combination of most, if not all, of these responses to meet enrollment demand. The Commission's analysis identified potential costs for each of these responses.

Response	Annual Cost per Additional 10,000 FTE Students
Expand enrollment at SUS institutions	**$108.2 million**
Expand current joint-use facilities	**100.3 million**
Create modified joint-use facilities	**60.2 million**
Establish state college system	**76.9 million**
Authorize community colleges to offer selected baccalaureates	**66.5 million**
Increase state subsidy to students in private institutions*	**30.0 million**

**Based on annual Florida Resident Access Grant Award of $3,000 per student. This figure does not include the cost of increasing the value of all existing FRAG awards (approximately $32.5 million based on 20,344 recipients in 1997-98 and an additional $1,600 per award).*

The Commission has identified responses to meet the future postsecondary access needs in our state.

A more detailed analysis of each of the responses can be seen in Appendix B.

While some of the responses appear to be more cost effective than others, in all cases an increased investment in higher education will be necessary to serve the access needs of the state.

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Recommendation:

The legislature must provide additional funding for meeting the access demands for higher education.

No single response will provide enough capacity in a timely and cost-effective fashion.

The responses identified vary in cost and time to implementation. No single response will provide enough capacity in a timely and cost-effective fashion. The Commission believes that the existing universities should continue to grow by a similar number of students during the next ten years, as they have during the past ten years. Additionally, the concept of using community colleges to offer a limited number of baccalaureate degrees would accommodate about five percent of the anticipated growth. Community colleges can be expected to grow in response to enrollment pressures at the lower level under many of these responses. The independent institutions could serve about ten percent of the growth. The responses that are likely to serve a large proportion of the growth will be either a "middle tier system" or expansion of the SUS/Community College joint-use model or some combination of both.

Recommendation:

No single response will assure quality and cost effectiveness in meeting the access needs of our state. A combination of the responses identified above should be used to meet these needs.

Responses that can be immediately implemented are the continued growth of the State University System and the Community College System, increased use of the independent sector, and institutional development of distance learning programs. Other responses will take some time to plan prior to possible implementation.

Recommendations:

Any four-year public postsecondary institution authorized in the future in Florida should not include doctoral education and research as part of its mission.

The Postsecondary Education Planning Commission should develop a feasibility plan outlining the actions necessary to create a "middle tier" system for our state. The plan should address governance issues related to implementation of this response to access. This plan should be completed by December 31, 1998, for submission to the Legislature for consideration.

The Board of Regents should prepare a detailed plan for expanding the joint-use model. The plan should address the anticipated number and location, optimal size, instructional loads of faculty, and anticipated funding requests for both operating and capital costs of these joint-use centers (both in total funding and on a per-student basis). This plan should be completed by December 31, 1998, for review by the Postsecondary Education Planning Commission and submission to the Legislature.

The State Board of Community Colleges should develop a methodology for determining the need for and costs of offering limited baccalaureate programs at selected community colleges. These recommendations should be completed by December 31, 1998, for review by the Postsecondary Education Planning Commission and submission to the Legislature.

Allowing community colleges to offer selected baccalaureate programs would require changes in institutional accreditation and program approval. Because this expansion would have implications for other public and independent postsecondary institutions, an objective third party should be involved in the approval process.

Allowing community colleges to offer selected baccalaureate programs would require changes in institutional accreditation and program approval.

Recommendation:

The Postsecondary Education Planning Commission should be charged with program approval for baccalaureate programs for community colleges. This process would be similar to the existing contract approval process used by independent institutions. The Commission should work with the State Board of Community Colleges (SBCC) in developing this baccalaureate program approval process. No community college should be allowed to request a change in institutional accreditation status without approval of the SBCC and the Commission.

Access and Productivity

A well-educated citizenry is the cornerstone of the future of Florida. Access to educational opportunities and degree attainment are critical to future economic development and many quality-of-life issues in the State. Students graduate from high school with a diploma and a mix of skills and abilities that should prepare them to continue their education in a vocational program, community college, or state university. As a matter of public policy, Florida should provide an educational opportunity to continue study in an appropriate program commensurate with the qualifications of the student. While the definition of a "qualified student" can change and vary depending on the student and the program in question, access to such opportunities should be provided if the student can meet reasonable entry requirements.

A well-educated citizenry is the cornerstone of the future of Florida.

With the enrollment and funding challenges facing Florida, commitments to fund increased enrollment growth will be needed from the Legislature, and postsecondary education institutions will have to become more efficient in their operations and productive in terms of their education and graduation of students. Currently, the educational experience is fragmented with artificial gateways and barriers separating public education, community colleges, universities, graduate school, and continuing education. Further, some curricular redundancy appears to exist between the high school and postsecondary general education curricula. Yet, approximately 60 percent of recent high school graduates entering community colleges require remedial instruction in at least one area. Such data suggest that either high school grades are not always an indicator of student ability or that high school curricular outcomes do not equate with postsecondary entrance requirements. The educational experience should be a seamless and efficient continuum from pre-school programs through graduate school.

Approximately 60 percent of recent high school graduates entering community colleges require remedial instruction in at least one area.

Postsecondary students have exhibited high failure rates in some courses. Despite considerable discussion, required mathematics and science continue to exhibit high failure or non-completion rates. The State of Florida may underwrite several course attempts before a student experiencing problems receives a degree. Early intervention and innovative teaching strategies could go a long way toward fostering student progression and decreasing the number of unsuccessful state-funded attempts at a course. These so-called bottleneck courses have been discussed for several years with little concrete results. Yet, they negatively impact student progression and drain the resources of the educational system.

Goal

Florida must increase the productivity of the postsecondary educational system.

Recommendations:

The Articulation Coordinating Committee should examine the feasibility of further integrating the educational experience across the public and private sectors and recommend specific measures that would reduce any artificial barriers that currently exist. Such recommendations should include how the high school curriculum can be improved and integrated with the general education curriculum now present in postsecondary education to reduce curricular redundancy, decrease the need for remediation, and foster student degree attainment.

Priority for performance-based incentive funding should be given to improving completion rates in high failure rate (bottleneck) courses.

Technology

Over the course of the last eight years, the Commission has followed the advances of technology and the resulting policy challenges that have arisen. Despite the large number of experimental research projects undertaken to investigate the impact of computer and other communications technologies, not enough is known to state broadly that they improve the learning process. The new technologies are exciting, and evidence exists to support their potential educational effectiveness. Yet, as many experts have suggested, a careful and conservative approach is warranted as computer and communications technologies are integrated more completely into the teaching and learning process. Clearly, technology will not be the panacea for all of the problems facing the state's educational sectors; however, educational technology can allow postsecondary educational institutions to become more efficient in teaching additional students.

Clearly, technology will not be the panacea for all of the problems facing the state's educational sectors.

Goal

Florida must use educational and telecommunications technologies to improve student learning, access to the associate and baccalaureate degrees, and overall institutional efficiency.

Service Areas and Credit Toward a Degree

Internet web sites containing course offerings from a variety of providers and virtual postsecondary institutions, where Florida students will be able to enroll in in-state and out-of-state courses and programs which are delivered through a variety of telecommunications technologies, are beginning to emerge. The State Board of Community Colleges and the State University System Board of Regents have endorsed policies which ameliorate the traditional service area boundaries. The new policies do not eliminate the traditional service areas, but they do prescribe how institutions can collaborate on the delivery of instructional programs outside of their service areas using distance learning technologies. Experience in other states has shown that such barriers cannot be maintained in the face of continued technological advances and increasing numbers of private providers of educational programs entering the market. Clearly, Florida's postsecondary system is in a transitional period to a more open market environment. Commission projections suggest a high demand for postsecondary educational programs and services in all sectors. Policies that might act to restrict the delivery of educational programs and services to Florida students should be eliminated.

Recommendation:

The Board of Regents and the State Board of Community Colleges should eliminate any policy that restricts student access to instructional courses and programs using distance learning technologies.

As more educational programs are developed for delivery via nontraditional means, students will find themselves assembling semester schedules based upon courses from more than one institution. Soon, students may often enroll in at least one course that will be delivered via videotape, television, or the Internet as a part of their semester schedule. Obtaining financial aid and credit toward the degree for distance learning courses and programs can still be problematic when such programs originate outside of the state or student's institution of record. Under current federal financial aid policy, without a formal written agreement, the student would not meet the "full load" requirement if one or more of the courses comprising the 12 credit hours originated from another institution. Such a limitation would be a major disincentive for students to take advantage of the conveniences offered through distance learning technologies at a time many states are trying to encourage student utilization of such methods. Further, many students and parents will want to investigate "banking" credit obtained from one or more remotely located institutions toward obtaining a degree. Although the acceptance of credit toward the degree has always been a decision left to the institution granting the degree, the new methods of delivery, the increased number of virtual degree granting institutions in other states, the growth of offerings in the private sector, and consumer demand suggest that the public institutions should re-examine existing policies. One option could be to provide degree-granting authority to one or more institutions willing to accept large blocks of credit earned through distance learning.

Recommendations:

Each state university and community college should provide all students with current and accurate information about the process for seeking financial aid and the acceptance for credit toward a degree for courses that originate from outside institutions.

The Board of Regents and the State Board of Community Colleges should examine the feasibility of providing degree-granting authority through an existing institution or a "virtual institution" for students who wish to complete large portions of their coursework through alternative means.

Student and Faculty Support

A sizable obstacle to realizing the potential of the new educational technologies is not technological capacity but rather inadequate attention to faculty development. On one hand, institutions must be induced to invest in this activity. On the other hand, faculty must be induced to participate. This means not only addressing current reward structures, but also ensuring that the required tools and training are made accessible. Given that faculty and students are willing to learn new ways of teaching and learning in the classroom, the fundamental lack of equipment in most classrooms seems destined to make significant progress difficult to obtain. Even if faculty and students receive intensive instruction and training in incorporating technology into their teaching and learning, little long-term impact can be made if computers, software, or other necessary equipment are unavailable. Few classrooms on community college and university campuses are equipped with more than a chalkboard, overhead projector, and screen. Telephone lines or network connections, computer workstations, and presentation projection equipment are still very much an exception in the average classroom. Until a critical mass of equipment becomes available in the average classroom, the teaching and learning process may change little. The training needs of the students and faculty vary depending, to a large extent, upon the capabilities or resources of a particular campus. As a result, one statewide, state-funded, training program would be hard-pressed to meet all types and levels of training required.

Recommendations:

> The Board of Regents and the State Board of Community Colleges should focus on providing the required tools, training, and technological support to faculty members necessary to enhance or adapt their delivery of instruction.
>
> The Board of Regents and the State Board of Community Colleges should review the traditional faculty reward structure to ensure that adequate attention is devoted to the technology training and course development at the institutional level. Faculty members should be required to attain a minimal level of technological ability as a condition of employment.
>
> The Legislature should adapt the Teaching Incentive Program to reward faculty members who successfully convert or adapt their course materials for effective electronic delivery.

The ultimate success or failure of efforts to deliver instruction via alternative methods such as videotapes, video-conferencing, or the Internet and World Wide Web will be determined, in large part, by the level of support offered to students. Both the British Open University and the soon-to-be-established Western Governors University recognize the importance of consistent support services. Both institutions offer a network of learning support centers and/or tutors to ensure better student success. Through such support centers, students should be able to receive academic and personal assistance with any problems or concerns they might have related to their educational experience. Community colleges, libraries, and state universities should be designated as learning support centers with specific funding arrangements and clientele determined by course enrollments within their service area. Postsecondary institutions, in partnership with vocational/technical schools and regional workforce development structures, as well as local clinics, corporations, schools, libraries and other organizations, provide good places to begin developing the required statewide support network. Such entities could be designated as learning support centers depending upon demonstrated need and their ability to provide the required levels of service.

The ultimate success or failure of efforts to deliver instruction via alternative methods will be determined by the level of support offered to students.

Recommendation:

> State universities and community colleges offering distance learning courses and degree programs should be required to develop a plan that ensures students who are enrolled in such degree programs will be provided appropriate student support services. The plan should include a description of the services to be provided and provision for funding the delivery of such services.

Providing timely and accurate information about degree requirements and course enrollment options can go a long way in helping students obtain their degrees in the most efficient manner possible. Attempts to automate all or parts of the advising process here and in other states have met with varying levels of success. The State University System has been implementing the Student Academic Support System (SASS) for the last ten years. SASS is a computerized degree audit system that analyzes a student's transcript, measuring progress toward the completion of degree requirements. In its original design, the SASS system was only available to faculty, and reports were produced for distribution to students. SASS is now accessible to students through campus computer networks. When the Commission reviewed the progress of SASS in its 1990 study, ***The Impact of Undergraduate Enhancement Funding***, a number of important points were raised that should be reiterated.

- The SASS technology worked very well; however, problems existed in the implementation of the system.
- Students often received reports after advising was completed.
- The SASS system was understaffed on most campuses with most institutions using a part-time director.
- SASS was not uniformly implemented. Several campuses reported that some colleges and departments refused to use the system.
- All advising personnel interviewed by Commission staff and consultants at the time reported that they believed that the SASS would be an outstanding tool for advising but that it should never be a substitute for a trained advisor.

No matter how sophisticated, no system will be effective unless it can provide students with what they want and need.

No matter how sophisticated, no system will be effective unless it can provide students with what they want and need. Further, any advising system that does not add value above what is currently available at the campus level would not be used by faculty and students. The Statewide Student Advising System now under development has received varied levels of support among the sectors and does not appear, in its current design, to improve the advising process for the large majority of students. If the state is to approach secondary and postsecondary education as one seamless system, logically, the process of student advising at every level should be considered. Further, with the changes recently brought about in the delivery of workforce education, the need for a comprehensive solution to educational and career advising would seem even more necessary.

Recommendation:

- The current design and implementation of the Statewide Student Academic Advising System should be reconsidered so that the experience of other state systems and the needs and benefits to students can be more readily considered and included.

Access to Technology

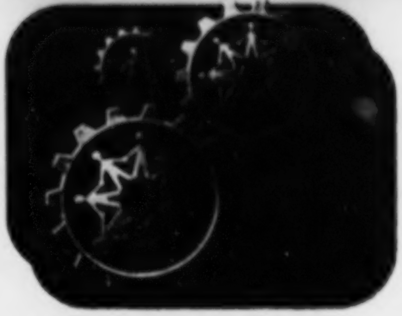
Access to the appropriate technological and informational resources is critical to the quality of our educational institutions, the ultimate success of our graduates, and the economic development initiatives within the state. Because technology tends to change quickly, it is difficult to acquire and maintain state-of-the-art equipment such as computers. Further, to avoid the increasing costs involved with replacing obsolete technologies, business and industry have been moving away from investing capital funds in technology and including such costs as a part of their ongoing operating costs through leasing equipment and subscribing for software and Internet services. While this might not be appropriate for all aspects of the equipment and services in use in education and state agencies, the lease/subscription model has been routinely used by the state in several key areas. Florida also has ample experience with subscribing or licensing services and products. The Department of Education licenses telecourses and other educational programs. All state agencies use software licenses. On-line information databases have recently been licensed by the libraries in the State. Clearly, from both a business and industry perspective and from past behavior of the state with regard to products and technological services, a trend toward moving the costs of technology away from capital expenses (operating capital outlay) to an ongoing expense seems particularly relevant. State agencies and educational institutions should explore the feasibility of including more of their costs for acquiring and using technology within their ongoing operating expenses.

Recommendations:

The Board of Regents and State Board of Community Colleges should conduct a review of equipment procurement plans and replacement policies for advanced telecommunications and computer technologies and make recommendations concerning the feasibility of shifting the costs of technology away from capital expenses (operating capital outlay) to ongoing expense categories through short-term lease arrangement or other means. The review could also include the consideration of plans to require students to obtain computers as a condition of their enrollment.

The Board of Regents, State Board of Community Colleges, and state libraries should place a high priority on the statewide purchase and/or licensing of on-line databases and related instructional materials or equipment.

A Seamless System



Florida's education system continues to face significant challenges posed by steady enrollment growth and a rising demand for services for an increasingly diverse population. In this environment, all education sectors need to be able to respond to the lifelong educational needs of Floridians. And they need to provide a broad range of programs to meet a variety of individual and workforce needs, while being sensitive to the unique needs of all segments of the population. For this to occur, a coordinated and cost-effective delivery system must be in place.

Goal

Florida must provide a seamless system of quality education for its residents from pre-kindergarten through graduate school and beyond.

A seamless system is one coordinated educational delivery system that allows students to move smoothly from one education level to the next so that they are able to optimize their achievement. Such a system can offer Floridians many choices of high quality educational programs and services spanning their lifetime. A unified education system, however, calls for students who are fully prepared academically as they progress from one education level to the next.

Preparation for Postsecondary Education

The need for Floridians to pursue education beyond high school continues to increase. The Florida Bureau of Labor Market Information projects that, in the coming decade, Florida's expanding and strengthening economy will demand better-educated and higher-skilled workers. The Commission strongly believes that if Florida's postsecondary system is to become more efficient and productive, graduates from the state's public schools must become better prepared academically for postsecondary education. More simply, the best way to improve Florida's colleges and universities is to improve and strengthen the academic choices made by the state's high school students.

As this decade began, state leaders and policy makers determined that a primary strategy to strengthen the effectiveness of Florida's education system was to expect greater academic achievement from its public school graduates. Accordingly, curriculum frameworks were revised and the Sunshine State Standards were established that identify what students should know and be able to do at different grade levels. As a new assessment measure of student and school performance, the Florida Comprehensive Assessment Test (FCAT) was developed to measure high levels of reading and mathematics achievement reflected in the Sunshine State Standards. The plan is to make the FCAT a high stakes test for students, replacing the High School Competency Test for purposes of high school graduation and the College Placement Test for entry

The best way to improve Florida's colleges and universities is to improve and strengthen the academic choices made by the state's high school students.

into universities and community colleges. In addition, the Legislature has raised high school graduation requirements, and much of the operation of the public school system has been decentralized to provide teachers and parents with the flexibility to address the educational needs of their students.

Additional and more rigorous academic requirements have heightened efforts to narrow the gap between the skills required for high school graduation and the skills necessary for successful postsecondary work. Academic success at the postsecondary level can be directly attributed to the courses that a student has mastered in high school. A recent analysis of the U.S. Department of Education's National Education Longitudinal Study concluded that students who take rigorous mathematics courses, such as algebra and geometry, are twice as likely to attend college than their classmates who did not enroll in the math classes. The study also found that 71 percent of low-income, disadvantaged students who took these rigorous math classes went on to college, compared to only 27 percent of low-income students who did not enroll in algebra and geometry.

The best way to improve urban and low-income students' performance is to improve their curriculum content. As an incentive to increase students' preparation for college, the 1997 Legislature directed each school district to award a differentiated College-Ready Diploma to students who successfully complete an advanced high school curriculum that includes credits in algebra (2), geometry, biology, chemistry, physics, and foreign language (2). A DOE task force is currently working on modifications that will link this curriculum to the college preparatory curriculum recommended for the State University System and to eligibility for the Bright Futures Scholarship.

Recommendations:

> The Department of Education should establish as a goal the attainment of the College Ready Diploma as a requirement for graduation from all Florida public schools.
>
> The Board of Regents and the State Board of Community Colleges should work collaboratively with the Department of Education to encourage all high school students to take the college preparatory curriculum.

Since 1996, a letter has been sent annually to all Florida public eighth grade students and their parents expressing the importance of their upcoming four years in high school--as a time for preparation for success as an adult. The joint letter, signed by the Commissioner of Education, the Chancellor of the State University System, and the Executive Director of the State Community College System, contains specific course recommendations to ensure that these students are "college ready" when they receive their high school diplomas.

The college-ready diploma can serve as an important student/parent advising opportunity. While vocational preparatory programs provide an important option for Florida public school students to receive training for the state's workforce, parents and/or guardians should be informed that the college-ready diploma curriculum will greatly enhance the likelihood for student success at the postsecondary level and in the workplace.

The college-ready diploma curriculum will greatly enhance the likelihood for student success at the postsecondary level and in the workplace.

Recommendation:

> The Department of Education should encourage counseling programs in all middle and high schools to explain to students the curricular requirements of the college-ready diploma and academic competencies needed for successful postsecondary work and to provide parents with information on the value of the college-ready diploma curriculum for academic success at the postsecondary level and success in the workplace.

There is an inextricable link between career awareness and orientation and student retention and success, particularly for minority students and first time in college students. If Florida is to increase postsecondary degree production and, at the same time, develop a skilled workforce that will meet the state's needs, it must expand access for students to comprehensive career service programs.

Recommendation:

> All universities, community colleges, vocational centers, and public schools should provide comprehensive career services for students that will link academic programs with careers and will provide students with experiential work internships and cooperative education opportunities.

The Department of Education and Florida's schools must continue to set high expectations for all students.

The Commission believes that the Department of Education and Florida's schools must continue to set high expectations for all students. If higher standards are both required and clearly defined, students will make progress to attain them. There is no disputing, however, that individuals learn in very different ways and at very different rates. In the past, many of the diverse population of students did not receive appropriate counseling regarding academic class options and failed to select challenging courses or to stretch themselves for maximum achievement. It is important to state that, in the short term, if all students were required to complete the college-ready diploma curriculum prior to graduation, there would be a significant number of students who would not be successful and would either fail the high-level courses, refuse to enroll in the courses, or leave school. The Department of Education must be equally diligent in its work with the 67 school districts to improve the performance and prospects for success of the large group of public school students who are at the low end of the academic scales, both in aptitude and performance.

Each individual student must be guided toward his/her optimum achievement level in preparation for education beyond high school and for the workplace.

While the Department of Education strives to identify specific levels of student achievement needed for high school graduation, clear standards of academic achievement that would specify the academic preparation necessary to succeed in a postsecondary institution have not been identified for all postsecondary sectors.

Recommendation:

> The Department of Education, in conjunction with the Postsecondary Education Planning Commission, the Florida Commission on Education Reform and Accountability, and the postsecondary sector boards should identify, for each education level beyond high school, the communication and computation skills that are required for academic success.

Educational Partnerships

A well-developed system of community college-to-university articulation exists in Florida, which also features many local agreements among postsecondary institutions and local public schools for articulation, acceleration programs, and other educational services. Postsecondary education in Florida, however, has been slow to embrace the state's K-12 reform movement, despite the repeated declarations by the state's business and industry that the value of a graduate at any level is based on what the graduate knows and is able to do. At the university level, pressures on the upper division due to increased demand for spaces and the rigid prerequisites and sequence of many baccalaureate programs continue to have a negative effect on the community college-university transfer process. In the coming decade, as the education sectors struggle to serve the needs of the projected high numbers of students seeking postsecondary education, the State Articulation Agreement that provides the framework for inter-institutional agreements must remain strong to promote and to facilitate the smooth transition of students from high schools to community colleges to universities.

Florida's postsecondary institutions must take greater responsibility for improving primary and secondary schools, particularly in the state's urban areas.

Florida's postsecondary institutions must take greater responsibility for improving primary and secondary schools, particularly those schools that serve economically disadvantaged students in the state's urban areas. Intersector partnerships among institutions throughout the state must become a priority and part of a long-term, "systemic" attack on educational deficiencies, with the goals being to improve student achievement and to increase the rates at which students graduate from high school and enroll in and complete a postsecondary degree.

Recommendation:

> To address the academic preparation of public school graduates, particularly in urban schools, the Board of Regents, the State Board of Community Colleges, and the State Board of Independent Colleges and Universities should direct all postsecondary institutions to establish educational partnerships with schools in their service area and/or region. This directive should be stated as a priority goal in the Strategic Plans of the sector boards.

Partnerships can enhance quality at every level of the educational system by expanding opportunities for communication, problem solving, and the sharing of expertise. Specific areas of collaboration can include: enhancing preparedness for college, particularly for the state's minority and economically disadvantaged students, increasing student retention at all levels, enriching programs for gifted students, improving articulation among education levels, developing and linking high standards, improving advising and counseling programs, and providing in-service teacher education. Most importantly, such partnerships can further identify for students clear points of convergence that will ease the transition to education beyond high school.

Recommendations:

> Each postsecondary institution should develop an action plan in conjunction with its public school partners that identifies specific activities to improve the public schools and that increases the number and percentage of qualified students who graduate from high school and who are academically prepared for postsecondary education and the workplace. The action plans should be presented to each state board for review and endorsement.
>
> The Board of Regents, the State Board of Community Colleges, and the Independent Colleges and Universities of Florida should review the effectiveness of all existing articulation agreements to ensure that barriers do not exist to the smooth transition of students from one educational level to another.
>
> The Board of Regents should ensure that the participation in public school partnership activities by State University System faculty and administrators from all academic disciplines is recognized in the service component of the faculty tenure system.

If the school reform movement is to succeed, Florida must be blanketed with school-college partnerships, with ongoing collaborative arrangements that focus on student achievement, the smooth transition of students from one education level to another, and the renewal of teachers.

If the school reform movement is to succeed, Florida must be blanketed with school-college partnerships.

The Preparation of Teachers for Florida Schools

The Commission believes that the crucial factor affecting the quality of education for public school students is the quality of the individual teacher in the classroom. The public school reforms of recent years aimed at curricular reform and school restructuring have focused attention on the role of the classroom teacher and a continuing challenge for Florida teacher preparation programs to provide a qualified and caring teacher for every student.

Increasingly diverse teaching and learning environments in Florida's schools will require bold innovation in teaching curricula and delivery, as well as in the state certification, in-service training, and assessment programs.

Students in Florida's classrooms are increasingly varied in their cultural, ethnic and social backgrounds and experiences, in the economic status and structure of their families, and in their range of abilities. The traditional beliefs and methods of how teachers teach and how students learn will not suffice. Preparing teachers for the increasingly diverse teaching and learning environments in Florida's schools will require bold innovation in teaching curricula and delivery, as well as in the state certification, in-service training, and assessment programs.

The significant number of out-of-state teachers employed annually in Florida schools heightens the importance of regular, in-service professional development for all teachers and administrators in all schools. To be successful, the initial and continuing education of teachers must be a joint responsibility of both the colleges and universities that initially prepare them and the school districts that employ them.

Goal

Florida schools must employ competent and caring teachers who have the knowledge and skills needed to meet the diverse needs and to optimize the achievement of their students.

To meet the demands of a world economy and to address the diverse needs of Florida students and schools, teacher preparation programs must prepare educators who can demonstrate in-depth knowledge of subject matter, can teach effectively, can match their teaching with the experiences and cultural backgrounds of their students, are skilled in classroom management and educational technology, and are visionary in their approach to school improvement. A teacher education curriculum now exists in Florida that focuses on the professionalization of the teacher and the comprehensive preparation of teacher candidates for work in schools of the 21st century.

This program is a five-year model that includes a degree major in an arts and sciences discipline, early field experiences in a variety of school settings, instruction in educational technology, performance assessment, student diversity, and opportunities for training in exceptional education and English as a

Second Language (ESL). Through this program, teacher candidates earn a bachelor's degree in their academic discipline, a master's degree in education, and state certification for employment. National survey research comparing graduates of the five-year model with graduates of traditional four-year baccalaureate programs found that five-year program graduates displayed higher instructional performance and preparation for leadership, were rated higher by principals on indicators of effectiveness of teacher preparation, and stayed in teaching longer.

The five-year model exists at the University of Florida, a large comprehensive program called the PROTEACH program. Since 1993, the program has graduated over 1,500 teachers, 11 percent of whom were minority teachers. The College of Education at U.F. reports that during this period over 76 percent of PROTEACH graduates became immediately employed as classroom teachers without placement assistance from the college.

In light of the high and continuing demand for additional teachers, it is best not to have all teacher preparation programs adopt the five-year model at this time, since this could have a detrimental effect on the increase of much-needed teachers. There are components of the model, however, including a strong academic foundation and early field experiences, in cultural environments that are different from one's own cultural background, that should be included in all programs.

Recommendation:

> All Florida teacher preparation programs in secondary education should include an arts and sciences discipline major and should include instruction in student diversity, performance assessment, educational technology, exceptional education, English as a Second Language (ESL), and early and varied field experiences in schools.

During the past five years, much has occurred to further define the competencies needed for effective teaching. The Education Standards Commission identified 12 Educator Accomplished Practices and three benchmarks for these practices: pre-professional, professional, and accomplished. The practices, benchmarks, and key performance indicators focus on the knowledge, skills, and dispositions needed by classroom teachers to promote student achievement at the highest level. The Commission also identified performance standards for continued program approval of teacher preparation programs in Florida. Using these standards, the Department of Education has restructured the continued program approval process into a results-oriented outcomes assessment.

The teaching profession should be accessible to all individuals who possess the knowledge, skills, and commitment to perform effectively in the classroom.

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Recommendation:

> The curriculum of all teacher preparation programs in Florida should be structured so that, prior to graduation, teacher candidates are able to demonstrate successfully specific skills/competencies, as identified in the 12 educator-accomplished practices, and are able to teach and assess the content in the Sunshine State Standards.

The Commission believes that the teaching profession should be accessible to all individuals who possess the knowledge, skills, and commitment to perform effectively in the classroom. A process needs to exist in Florida that will allow academically talented individuals with an expertise and an interest in teaching to be recruited, trained, and certified for employment in Florida schools. In addition, the talents of our state's retired citizens should be fully utilized in our public schools.

Recommendation:

> The Department of Education, in conjunction with the school districts and the state's teacher preparation programs, should implement a performance-based teacher certification system that will provide sufficient flexibility to attract qualified individuals to the teaching profession through the validation of competencies that directly relate to teacher effectiveness.

The Needs of Urban Schools

The urban environment is often characterized by higher incidences of poverty, violence, truancy, and dysfunctional families; and the urban school in Florida has emerged as the focal point for incoming immigrant, refugee, ethnically and racially diverse, bilingual, and mainstream students. Students in urban schools are frequently characterized as "at risk," based on their socioeconomic backgrounds, social and familial stresses, lack of control in their lives, limited views of their own futures, and lack of self-esteem and self-identity. These students are often dependent on their schools to succeed in life.

The urban school clientele represents a unique set of educational needs, and the classroom teacher plays a crucial role in creating and sustaining a learning environment for urban students. For urban classroom teachers, difficult and distinctive challenges exist, which are magnified by the fact that these schools are where most beginning teachers are hired and where most of them quit or fail. Accordingly, to prepare teachers to teach an increasingly diverse student population in urban schools effectively requires a broad curriculum with early and extensive training and mentoring in urban school environments.

The classroom teacher plays a crucial role in creating and sustaining a learning environment for urban students.

The Florida public school system is large, diverse, and comprehensive and includes over 3,200 schools, 122,000 teachers and 2.2 million students. Seven of the state's 67 school districts enroll over 100,000 students, which is nearly

54 percent of the state's public school enrollment. The data that appear in Florida Public Schools At-A-Glance (Exhibits C-1 through C-10) display the following realities regarding Florida's ten largest school districts. These urban districts enroll:

- 63 percent of the state's public school students,
- 76 percent of the state's minority students,
- 59 percent of the state's exceptional education students, and
- 84 percent of the state's limited English proficient students.

Florida Public School District Size, Fall 1996

District Size	*# of Districts*	*Enrollment*	*% of Enrollment*
Over 200,000	2	559,696	25.0
100,000 - 199,999	5	647,480	28.9
50,000 - 99,999	5	307,757	13.7
20,000 - 49,999	15	463,002	20.7
10,000 - 19,999	9	125,782	5.6
5,000 - 9,999	11	77,854	3.5
1,000 - 4,999	20	58,712	2.6
Total Enrollment		**2,240,283**	

Source: Florida Department of Education

These data confirm that Florida's urban areas and urban school districts are exceedingly large and include an extraordinary diversity of students with differing ethnic, cultural, and socio-economic backgrounds. Students in these districts include a high percentage of exceptional education students or limited English proficient students. The six largest school districts have minority enrollments which range from 86 percent (Dade County) to 46 percent (Duval County). See Exhibit C-4, Pre-K Public School Membership.

Prior to graduation and state certification, all of the state's prospective teacher candidates should be able to demonstrate the knowledge, skills, and attitudes needed to effect long-term improvement in the academic performance of urban students. Primary to this training should be early field experiences and internships in schools with multiple and diverse student populations. These programs should provide training in multicultural issues of diversity, performance-based assessment, exceptional education, English as a Second Language (ESL), and educational technology.

All of the state's prospective teacher candidates should be able to demonstrate the knowledge, skills, and attitudes needed to affect long-term improvement in the academic performance of urban students.

Minority Teacher Supply

Florida's production of minority classroom teachers has failed to keep pace with the steady increase in minority school population.

Florida's production of minority classroom teachers has failed to keep pace with the steady increase in minority school population. To address the needs of Florida's urban schools, this needs to be corrected. Currently, the percentage of Florida teachers belonging to minorities (21 percent) is significantly less than the percentage of Florida students belonging to minorities (43 percent). In the next few years, it is hoped that the State Minority Student Teacher Scholarship will significantly increase the numbers of minority graduates of state teacher preparation programs and will provide additional minority teachers for Florida schools. Each school district must increase the ethnic and cultural diversity of its teaching corps so that it reflects the diversity of its student population.

Recommendations:

Florida's teacher preparation programs should adopt the following priority goals, and these goals should be stated in the Strategic Plans of the sector boards:

(1) to restructure their curriculum to prepare teachers that will meet the educational needs of urban school students and will improve student achievement and success in urban school environments.

(2) to recruit, retain, and graduate higher numbers of minority teachers.

The Legislature should expand the Minority Teacher Education Scholarship Program through increased funding to support minority teacher candidates.

Teacher Salaries and Work Environment

In Florida, teacher salaries have fluctuated during the past decade. As with other professions, wage increases for teachers declined during the economic slowdown of the early 1990s and salary increases did not keep pace with the rising cost of living. National Education Association data of 1995-96 public school teacher salaries reveals that Florida ranked 29th nationally ($33,330), which was 88 percent of the national average ($37,685). Interestingly, there was no Southern state ranked in the NEA's top 25 states by salary level.

The average salary paid to a Florida public school teacher during 1996-97 was $33,885 (See Exhibit C-8, Average Teacher Salaries). There is significant variation in school district average salaries, particularly when degree level is considered. Salaries ranged from a low of $25,740 for a bachelor's degree in Union County, to a high of $47,729 for a doctorate degree in Dade County. Of greater importance to teacher recruitment, in 1996-97 the average starting salary in Florida was $23,226; eleven counties had starting salaries less than $22,000 and only four counties had starting salaries over $28,000.

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Minimum Teacher Salaries Bachelor Degree Level, 1996-97

Salary Range	Number of School Districts
$20,000 - $22,000	11
$22,000 - $24,000	41
$24,000 - $26,000	10
$26,000 - $28,000	1
$28,000 - $28,600	4

In 1996-97, the average starting teacher salary in Florida was $23,226.

The low salaries in Florida continue to exacerbate the recruitment of qualified individuals to meet the growing demand for qualified teachers in many school districts in the state, particularly in the urban areas. While the state has made significant progress to raise performance and increase accountability in the teaching profession, to attract bright, talented individuals to teaching, salaries must be competitive with other business and health care professions and the working environment must be safe and conducive to teaching and learning.

Recommendation:

The Department of Education must take the lead in the statewide implementation of an action plan to enhance the teaching profession. The Action Plan should address the following priority goals:

(1) raise teacher salaries to the upper quartile nationally;
(2) provide regular in-service professional development for teachers and administrators; and
(3) ensure a safe and professional work environment for teachers.

Teacher Supply and Demand

The Department of Education reports that the 28 state-approved teacher preparation programs in Florida's public and independent institutions annually produce nearly 6,000 new teacher candidates. Due to rapid and continuing growth of Florida, however, these programs continue to be unable to produce sufficient numbers of teachers to meet the teacher demand for the state's public schools. As a result of this condition, the Department of Education estimates that from 40-45 percent of annual teacher vacancies are filled by out-of-state individuals. The need for new or replacement teachers in the state's 67 school districts fluctuates dramatically each year and is influenced by many factors, including economic conditions, budget priorities, retirements and relocations, student enrollment fluctuations, class size policies, and the high demands placed on classroom teachers. This variability across the state reduces the likelihood of accurate reporting of the supply of and demand for teachers each year and makes the state's teacher preparation programs unable to respond to teacher needs by level or by degree specialty.

The Department of Education estimates that from 40-45 percent of annual teacher vacancies are filled by out-of-state individuals.

A Seamless System

The DOE Office of Strategy Planning produces annual state-level reports that provide estimates and trends on new teacher hires by field and out-of-field and tracks enrollments in the state's teacher preparation programs. Technology exists that can improve the accuracy and completeness of the reporting by school districts of teacher supply and demand data and can allow the application process for in-state and out-of-state teacher candidates to become more efficient.

Each year, approximately seven percent of all teachers retire or resign. It is important for school districts and for teacher preparation programs to collect and analyze information gained from teachers who leave the profession.

Recommendations:

> The Department of Education, in conjunction with the state school district personnel offices and the state teacher preparation programs, should establish a statewide database to report school district teacher vacancies and maintain qualified applications on file, both by school level and by degree specialty, and should implement a standard computerized application form for electronic transmittal by teacher candidates and for access by school employers.
>
> The Department of Education should annually analyze information collected by school districts via exit interviews as to why teachers leave the profession.

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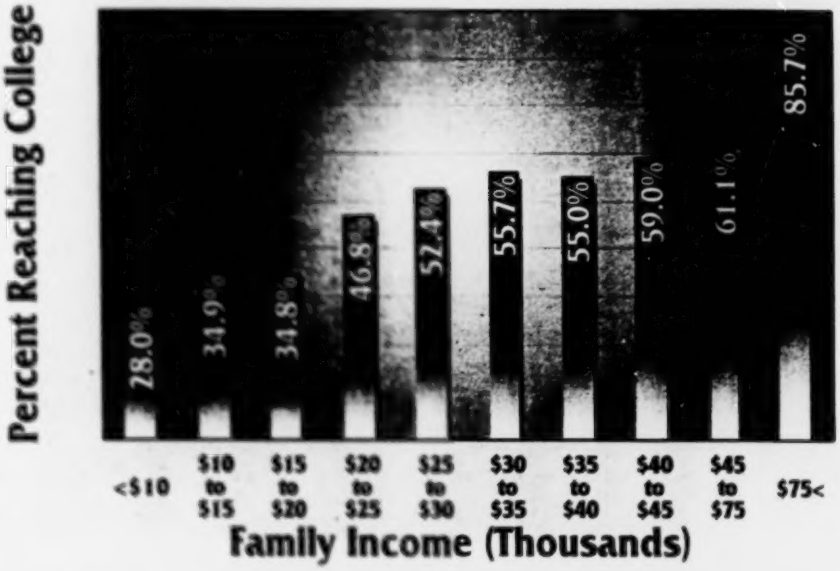
Postsecondary education serves the State of Florida by increasing the educational attainment of its residents. In this regard, educational attainment impacts individuals: 1) through earnings and improved standards of living; 2) as families, since a child's future degree attainment is strongly influenced by family income; and 3) collectively, as a state's quality of life and need and ability to provide services to socially-dependent portions of the population. Therefore, the outcomes of postsecondary education are related to degree attainment and economic and social conditions.

Educational and skills attainment, particularly at the postsecondary level, expand workers' productivity. In addition, better educated workers adapt more easily to new tasks and processes. A good education also prepares workers to work more effectively in teams because it enhances their ability to communicate with and understand their co-workers. (National Center for Education Statistics, NCES 97-269)

Chance For College Among 18-24-Year-Old Dependent Family Members By Family Income, 1995



A child's chance for college is strongly influenced by family income.

Note: Chance for college is the product of high school graduation rates and college continuation rates.
Source: Postsecondary Education *Opportunity*, October 1997.

The productivity of the workforce is a primary determinant of a state's quality of life. A better understanding of the relationship between worker productivity and the condition of education is essential to understand how investment in education contributes to the economy. Worker productivity is typically measured as output per worker or per hour worked. It is affected by many factors, including the education and skills of the workforce.

While the economic base of Florida's recent past--agriculture, mining, tourism, and retirement--offered flexibility in the educational demands of its workforce, leading economists have found a dramatic change occurring in the international marketplace in which Florida not only is included but plays an important role. In contrast to the economies of the 18th and 19th centuries that were built with brute force using natural resources and the 20th century that relied on the application of mechanical power to the industrial production model, the engine of economic development for the 21st century will be driven by those who can maximize and harness intellectual resources. Governments competing for economic superiority need to understand this shift and focus on preparing their residents to meet new workforce demands.

As the dramatic shift to intellectual resources continues to evolve, postsecondary education must fulfill two fundamental roles: workforce preparation and economic development.

As the dramatic shift to intellectual resources continues to evolve, postsecondary education must fulfill two fundamental roles: workforce preparation and economic development. *Workforce preparation* prepares people for current jobs or for ones that will soon be available. *Economic development* entails a long-term, future perspective of and plan for creating the economic condition desired by a state's government, industries, and citizens.

Economist Lester Thurow asserts that *workforce preparation* and production of the best and cheapest products, both old and new, will depend upon educating the bottom 50 percent of the workforce to become skilled in the new man-made, knowledge-based, information-power-driven economy of the next century, whereas, educating the top 25 percent of the labor force is critical to *economic development.* He asserts that people in this top group will invent the new products of tomorrow. "In the century ahead comparative advantage will be man-made. Since technology lies behind man-made comparative advantage, research and development becomes critical" (1992). This will require re-examining the role of educational institutions and, subsequently, increasing the educational attainment of the entire population.

The degree to which Florida's postsecondary education fulfills its roles of workforce preparation and economic development reflects its level of performance and will define the state's future. If the State intends to reduce the portion of Floridians requiring public assistance, prepare a workforce for current jobs or for ones in the near future, and attract the highest paying jobs and the fastest growing occupational specialties (e.g., microelectronics, biotechnology, new materials industries, telecommunications, computers plus software, etc.), *then Florida must strengthen its education infrastructure.* (See Exhibit D-1, Evidence Supporting the Relationship Among Educational Attainment, Productivity, and Earnings.) Educational opportunity, curricula appropriate to a changing world, attention to societal needs, and focused research are all essential to a prosperous and competitive Florida.

Goal

Florida must produce an educated populace prepared to use intellectual resources in the workplace and to advance the economic and social conditions of the state.

Workforce Preparation

Workforce preparation involves readying people for a knowledge-based, information-driven economy.

Florida Trends

The general trends and conditions, such as the shift to intellectual resources, that affect the rest of the nation also are affecting Florida. The Florida Bureau of Labor Market Information (BLMI) projects that the Florida economy will continue to place emphasis on better-educated and higher-skilled workers as it becomes more knowledge-based and less production-based. Data from BLMI indicate: 1) in 2005 there will be 1.6 million new jobs in Florida; and 2) high demand, high wage, and high skill occupations will require postsecondary education and will pay substantially more than jobs that require only a high school diploma. The readiness of Floridians to fill high wage and high skill jobs is dependent on the ability of the state's educational services to prepare its residents.

Nearly half of all new jobs created between 1990 and 2005 will require a postsecondary degree (Exhibit D-2, Projected Number of Jobs, New Jobs, and Growth Rate by Educational Preparation Level), and jobs that pay substantially more (at least $9 per hour) will require postsecondary education (Exhibit D-3, Annual Openings for High-Demand Occupations in Florida Paying More than $9 Per Hour by Education and Training Level, 1996-2005). In turn, the likelihood of completing postsecondary degrees increases with the level of family income.

Florida Today

Florida is not sufficiently prepared to meet the demands of the emerging economy for better educated and higher skilled workers.

As a state, Florida is not sufficiently prepared to meet the demands of the emerging economy for better educated and higher skilled workers. For example, a strong indicator of how well a state is providing higher education for its citizens is the number of degrees granted per 100,000 working age population. Compared to other states, Florida produces merely 78.8 percent of the national average of annual baccalaureate degrees granted per 100,000 18-44-year-old population (1994-95) (Exhibit D-4, Annual Degrees Granted Per 100,000 18-44-Year-Old Population). Moreover, Florida has a 14 percent high school dropout rate and has 25 percent of its children living in poverty, compared to 11 percent and 21 percent, respectively, for the nation. (Exhibit D-1, Evidence Supporting the Relationship Among Educational Attainment, Productivity, and Earnings.)

When comparing Florida's degree production to economically strong states, Florida once more appears inadequately prepared to meet the demands of an economy driven by intellectual resources. For example, the top ten economic performing states were identified through calculation of a composite index of economic indicators relating to income, gross state product per capita, and disposable income (Exhibit D-5, Baccalaureate Degrees Granted Per 18-44-Year-Old Population in Top Ten Economically Strong States, 1994-95). As compared to the 1,113 average degree production rates of the identified top states, Florida granted 844 degrees per 100,000 of the 18-44-year-old population (76 percent of average).

Complicating the situation even more, comparing the working age population of Florida to the nation, the analysis reveals that the state's residents are not only less educated but poorer. In 1994, the median income of Florida families with children was $32,500, compared to $37,000 nationally (Kids Count, 1997). Although Florida matches the national average for per capita income, Florida's average wage and salary has been substantially lower (about 11 percent) than the U.S. average since 1980 (GAP, 1997). Despite boasting a job growth rate greater than the national average since 1994, as of 1995, Florida trailed six of the nation's largest states in the number of full- and part-time jobs per resident ages 18-64 (GAP, 1997). Consistent with earlier findings, employment and education data support that Floridians with baccalaureate or higher degrees earn higher salaries, see larger increases in their salaries over time, and are much less likely to receive public assistance than non-postsecondary degree holders.

Floridians with baccalaureate or higher degrees earn higher salaries, see larger increases in their salaries over time, and are much less likely to receive public assistance than non-postsecondary degree holders.

Educational Outcomes in Florida

	Full Time Earnings[1]	% Receiving Public Assistance	% Increase in Earnings[2]
Without High School Diploma	$3,685	29.5	10
High School Diploma	3,884	9.4	31
Voc/CC Certificate	5,640	10.4	21
Associate's Degree	6,542	1.8	24
Bachelor's Degree	7,707	0.5	34
Master's Degree	9,725	0.3	20
Doctoral Degree	11,568	0.0	21

Source: FETPIP, Lanham and Whitfield 1996, pages 10,12, &15.
Notes: (1) Fourth Quarter 1994 Earnings for Florida graduates 90-91 Cohort.
(2) Percent increase in earnings from 1991 to 1994 for 90-91 cohort.
Data collected in Fourth Quarter underestimate earnings for higher education.

Vision

In *Cornerstone: Foundations for Economic Leadership* (1989), the Florida Chamber of Commerce set forth this vision for a leadership economy:

Florida can be a leadership economy that helps set the pace for the rest of the nation. Already a leader in population and employment growth, Florida can build a world-competitive economy based on a dynamic mix of productive manufacturing and service industries that create a rising standard of living for

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all Florida residents. Moving well beyond regional leadership, Florida can be a leader in national and international arenas in the next decade. (p. 1)

In 1997, the Florida Commission on Government Accountability to the People published *Critical Benchmark Goals* to assist the State in setting priorities and guide decisions into the 21st century. Goals were set to increase the educational attainment of the populace, i.e., share of the population with a high school diploma and college degree; improve the adult literacy rate; and raise public satisfaction with public schools and institutions of higher learning.

Goals and Strategies

Educational goals and strategies for Florida must be framed through consideration of economic forecasts, completion rates for the nation and the top ten economically strong states, and postsecondary entrance rates to accomplish the vision for a leadership economy. This can be accomplished most effectively by addressing the educational attainment of both new high school graduates as well as the working age population at large.

In regard to postsecondary entrance rates, national studies repeatedly reveal the importance to program completion of immediate entrance into postsecondary education (i.e., by the October following high school completion). Nationally, more than 62 percent of high school graduates enrolled in college by October following graduation in 1994 (NCES 97-269). In regard to postsecondary program completion, a national longitudinal study revealed that ten years after high school graduation 24 percent of 1982 high school graduates completed a baccalaureate or higher degree, and 19 percent earned a postsecondary credential less than a baccalaureate (11 percent vocational certificate and eight percent associate degree) (NCES 95-304). While 64 percent of high school sophomores in 1980 *expected* to obtain a bachelor's degree, only 51 percent had in fact earned a baccalaureate or higher degree within ten years of high school graduation (NCES 95-304).

For a leadership economy, Florida must address the educational attainment of both new high school graduates as well as the working age population at large.

In Florida, despite approximately 56 percent of 1993-94 high school graduates indicating intentions to enroll in postsecondary education programs in the State, the Florida Education and Training Placement Information Program (FETPIP) found only 49 percent enrolled in Florida colleges and universities during fall semester 1994. Currently, some of the best data related to completion rates for Florida high school graduates are available from tracking the 1990-91 cohort (n=79,928 graduates). This longitudinal study reveals that four years after high school graduation, 11.4 percent of 1990-91 high school graduates received an associate degree or postsecondary vocational certificate, and 3.2 percent earned a bachelor's degree (Lanham & Whitfield, 1997). These completion rates, especially for the bachelor's degree, will continue to show substantial increases during the next few years as many students spend five or more years completing their baccalaureate.

Allowing for different cohort years and number of years studied between national and Florida databases, targets may be established for the share of high school graduates who: 1) enroll by October following their high school graduation, and 2) complete postsecondary credentials within six to ten years after graduating from high school. While the vast majority of growth in postsecondary education in Florida is projected to be composed of recent high school graduates (traditional college-age students) demand will continue to exist for nontraditional adult learners from the working age population who delay entry, do not complete their educational goals as traditional students, or require enhanced skills to address changing job needs. Recommendations need to address increasing the educational attainment for both these populations.

The Commission recognizes that postsecondary education as it exists today cannot fully respond to these challenges without increased access to degree completion.

Goal

Florida must increase the postsecondary education attainment of Floridians to meet workforce demand and to provide the intellectual resources for knowledge-based employment.

***Note*: The Commission believes that this goal and the following recommendations are fundamental to the future economic well-being of Florida. The Commission also recognizes that postsecondary education as it exists today cannot fully respond to these challenges without increased access to degree completion. Increasing access to degree completion will require strong collaboration, cooperation, and support from government, public and independent education, and business/industry in Florida.**

Postsecondary Participation of High School Graduates

Graduates from Florida's high schools have participated in postsecondary education at rates below the national average. For example, of the public high school students who graduated in 1993-94, enrollment in postsecondary institutions immediately following graduation, i.e., by October 1994, approximates 49 percent in Florida and 10 percent outside of the state. While this total approximates 59 percent for Florida's high school graduates, the national average for immediate participation of high school graduates in postsecondary education is 62 percent (1993-94). By 2005, four years of college will be required for 25.5 percent of new jobs, two years of postsecondary education or training will be required for 23.3 percent of new jobs, and a decreasing share of new jobs will be available for people with a high school diploma or less (Exhibit D-2, Projected Number of Jobs, New Jobs, and Growth Rate by Educational Preparation Level). In consideration of Florida's anticipated future workforce requirements, 75 percent of the state's employees will need education beyond high school.

Recommendation:

The State should increase the percentage of Florida's high school graduates who participate in postsecondary education immediately following high school graduation.

Enrollment Immediately Following High School Graduation	
Florida Target (2000):	65%
Florida Target (2010):	75%

Postsecondary Completion per High School Graduation Cohort

While the State needs to see an increase in the immediate entry of high school graduates into postsecondary educational programs, there needs to be a significant effort to also increase the completion of postsecondary programs by these students. After all, it is with attainment of postsecondary education in general, and with the baccalaureate specifically, that better paying jobs occur to benefit both individuals and the quality of life and economic condition for all Floridians.

Access to postsecondary education and its completion is affected by four major aspects: geographic access, social access, programmatic access, and economic access. Despite the state's strong commitment to access as demonstrated by a complex web of policies to meet students' needs and minimize barriers to articulation between community colleges and universities, other state policies negatively affect access to program completion. For example, state funding for merit-based student financial assistance far outweighing need-based aid, and the requirements for students to pay the full cost of funding for remedial course work after one attempt and to pass the College-Level Academic Skills Test (CLAST) prior to advancing to upper level status in baccalaureate programs may negatively affect the progression of students to program completion.

It is with attainment of postsecondary education in general, and with the baccalaureate specifically, that better paying jobs occur to benefit both individuals and the quality of life and economic condition for all Floridians.

While measuring entry into postsecondary education is relatively common, measuring program and degree completion has been limited to a few longitudinal studies. The national longitudinal study of 1982 graduates found that within ten years of high school graduation, 19 percent completed an associate degree or vocational certificate and 24 percent completed a baccalaureate or higher degree. In Florida, the study of postsecondary completion of 1990-91 high school graduates found that, within *four* years, 11 percent completed associate degrees or vocational certificates and 3.2 percent completed baccalaureates or higher degrees (*note different time frames due to availability of data*). To meet anticipated workforce demands, 19 percent of the 1990-91 high school graduates need to attain, within ten years, associate degree or vocational certificate completion and 20 percent, the baccalaureate or higher degree. In consideration of anticipated future workforce requirements, 25 percent of high school graduates of 2000-01 need to complete the associate degree or vocational certificate and 25 percent the baccalaureate or higher.

Recommendation:

The State should increase the postsecondary completion rate for Florida high school graduates by identifying and addressing factors that affect the progression of students through the education system. The State should minimize and eliminate the structural, financial, and programmatic barriers to degree attainment.

Postsecondary Completion per High School Graduation Cohort

Florida Target 2000 (1990-91 High School Graduation Cohort):

- Completion of Associate Degree/Vocational Certificate: 19% within 10 years
- Completion of Baccalaureate or Higher Degree: 20% within 10 years

Florida Target 2010 (2000-01 High School Graduation Cohort):

- Completion of Associate Degree/Vocational Certificate: 25% within 10 years
- Completion of Baccalaureate or Higher Degree: 25% within 10 years

Increase Baccalaureate Degrees Granted per Working Age Population

Striving to become a leadership economy warrants comparison to states with strong economies. When comparing baccalaureate degree production for the working age population (per 100,000 18-44-year-old population) to baccalaureate production in states having consistently strong economies, Florida is found wanting. In 1994-95, Florida granted baccalaureates at 76 percent of the average for the top ten economically strong states (844 for Florida, compared to 1,113 for the average of the top ten states). Florida should attempt to increase degree production to the average of the top ten economically strong states.

Recommendation:

The State should increase the number of baccalaureate degrees granted per 100,000 18-44-year-old population to the average degrees granted in the top ten economically strong states.

Degrees per Working-age Population

Florida Target 2000:	80% of Top Ten Average
Florida Target 2010:	90% of Top Ten Average

Educational Attainment for Adult Floridians

The State must not limit its attention on the educational needs of individuals to that of future high school graduates because many adults in Florida do not have the educational skills necessary to improve the economic condition of their families. Adult residents should be encouraged to attain high school equivalency and vocational skills that would afford them entry to jobs and earnings and cessation of government assistance. All of Florida's residents should have the opportunity to develop their talents to the fullest and to advance in their careers.

Recommendations:

Postsecondary institutions should recruit working age residents who have not completed postsecondary programs to return and complete those programs. The State should encourage residents to advance their education beyond their current level. The State should minimize and eliminate structural, financial, and programmatic barriers for returning adult students.

The state's workforce development initiatives and educational institutions should prepare working age adult Floridians who require government assistance for entry into and advancement in the workforce by increasing their literacy proficiency and occupational skills.

All of Florida's residents should have the opportunity to develop their talents to the fullest and to advance in their careers.

Economic Development

Florida's role in the world economy of the 21st century is dependent on the continuing discovery and practical application of knowledge. Long-term, sustained industry growth and economic success require long-term investment in research. Representatives from education, government, and business and industry stand jointly committed to enhance Florida's position as home to advanced science and technology. During the recent conference, High-Tech Florida Means Business: The Future of Science and Technology in Florida, representatives adopted the following key objectives:

- To bring together the champions of science and technology in Florida in a conversation about the benefits of statewide, public-private partnerships for the creation of high-tech jobs in Florida; and, to create a network of these individuals and organizations;
- To establish a university-industry-state government coalition to develop strategies for increasing support for and growth of science and technology in Florida and to enhance the transfer of technology from Florida's universities and federal labs to the private sector; and
- To increase public awareness and education, at all levels, about the value of high technology for attracting, retaining, and developing industry in Florida; and to promote the benefits to Florida's economy of science and technology developed in Florida's universities and colleges.

Long-term, sustained industry growth and economic success requires long-term investment in research.

Higher education can address these goals through strengthening partnerships and coalitions, supporting and expanding graduate education-- particularly in the engineering and sciences--and by seeking additional support for research and development projects, focusing on critical needs areas.

Goal

Florida must promote discovery and application of knowledge to improve its position in the interdependent global economy.

Partnerships

There is a need to strengthen partnerships with Florida industry to strengthen the economy, provide job opportunities for Florida graduates, and expand the state's high technology workforce. Representatives from education, government, and business and industry are committed to improving the economic condition and quality of life in Florida. These groups jointly endorse forming partnerships as a means for creating new jobs and improving the state's economic position.

Educational institutions benefit from partnerships with science and engineering-related business and industry through increased resources and enhanced opportunities for faculty and students in the marketplace, e.g., receipt of donated equipment for joint-use, addition of faculty in high demand fields, use of business/industry research and production facilities, generated income from jointly introduced products, increased opportunities for faculty consulting, collaboration on research projects, involvement of students in research projects, and placement of graduates. Business and industry benefit from the source of new employees, collaboration with faculty conducting state-of-the-art research, leverage for purchasing new equipment, space for equipment that is needed but infrequently used, and courses and training offered on site. All partners benefit when applying for grants from government and private entities that award preference to proposals submitted through partnerships.

Forming partnerships helps to create new jobs and improve the state's economic position.

Many of the state's educational institutions have formed partnerships with Enterprise Florida and other technology and industry councils to promote economic development in Florida through technology transfer from research centers such as the National High Magnetic Field Laboratory, the Moffitt Cancer Center, and the University of Florida Institute of Food and Agricultural Sciences (IFAS). Through the efforts of educational institutions and business and industry councils in Florida, the State is recognized as an international leader in areas of materials science, high magnetic fields, electro-optics and lasers, biomedical devices, biotechnology, and medical and agricultural technology.

Recommendations:

Postsecondary institutions should continue to form and enhance business, industry, and government partnerships that promote economic growth, research and development, graduate student training, and facilitate the transfer of people and ideas from academe into the workforce.

Postsecondary institutions and sector boards should target resources on fields in which education and industry share mutual strengths.

Postsecondary institutions should strengthen partnerships with public education to ensure that students are encouraged and prepared to pursue higher education opportunities in engineering and the sciences.

Graduate Education

The role of graduate education in Florida is to produce the intellectual leadership for the next century. Students with graduate degrees help create and impart valuable knowledge, attract high technology industry and businesses, contribute to the health of the state economy, and enhance the reputation of Florida's universities. Workers with master's, doctoral, and professional degrees in Florida earn more than workers with less education. While the average new bachelor's degree recipient working in Florida earns $24,600 annually, the new master's and doctoral degree holder earns $35,200 and $42,900 respectively. Approximately 8,000 master's and doctoral recipients from Florida public and independent universities find employment in the state annually. According to a recent study conducted by the University of Florida, the total incremental contribution to the Florida economy resulting from the increased earning power of advanced degree holders is $161 million annually. Combined with the off-campus expenditures made by enrolled graduate students, this yields a total annual impact of $242,494,910. Yet, with all of the advantages of graduate education in Florida, the State granted just 76 percent of the national average of master's degrees awarded, 76 percent of the national average of doctoral degrees awarded, and 67 percent of the national average of professional degrees awarded per 18-44-year-old population in 1994-95.

The role of graduate education in Florida is to produce the intellectual leadership for the next century.

Doctoral Degreees Granted By Selected States Per 100,000 18-44-Year Old Population Public And Private Institutions, 1994-95

State	Degrees Granted Per 100,000 18-44-Year-Old Population
Massachusetts	87.9
Illinois	58.3
New York	52.5
Colorado	49.9
Pennsylvania	50.3
California	38.9
Virginia	37.1
North Carolina	34.1
Florida	**31.1**
Georgia	30.2

U.S. Average 41.0

Florida granted 76% of the national average of doctoral degrees awarded in 1994-95.

Source: State University System, Academic Programs.
Note: *Per Capita measure is per 100,000 18-44-year-old population in 1993, U.S. Census Bureau.

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Florida's relatively low rank in graduate degree production may explain why the average employed Floridian earned $3,200 below the national average in 1994. Researchers at the University of Florida measured the relationship between the average pay per employee in the state and the percentage of graduate degrees to total higher education degrees conferred. They found that for every one percentage point decrease in the percent of graduate degrees conferred, a state's average pay fell $417. That translates into a drop of over $2,200 in annual pay per employee for the State of Florida; a large percentage of Florida's total difference of $3,200.

Florida granted 416 science and engineering doctoral degrees in 1994-95 by public and private institutions, less than one-half the national average per 18-44-year-old population.

Since the economy now disproportionately rewards science, engineering, and research and development (and has for at least a decade), it is to a state's advantage to increase the production of those graduate degrees that are needed to fill these positions. The National Center for Education Statistics reported recently that "in the United States, science and engineering degrees comprised a smaller percentage of all university degrees awarded than in most other countries with available data in 1992." Florida granted 416 science and engineering doctoral degrees in 1994-95 by public and private institutions, less than one-half the national average per 18-44-year-old population (Exhibit D-6, Engineering and Science Doctoral Degrees Granted). According to a recent University of Florida analysis, a large percentage of all graduate degree holders (70 percent) remain in Florida after they receive their advanced degrees. When only Ph.D.s are factored in, however, this percentage is reduced to 50 percent. Clearly, Florida must provide both the skilled workforce and the job opportunities to achieve and maintain a competitive edge in the high technology economy of the 21st century.

A variety of graduate programs are important to serve the diverse needs of the State and its citizens.

It is an incontrovertible fact that first-rate research universities cannot exist without the myriad contributions of strong graduate education programs. A variety of graduate programs are important to serve the diverse needs of the State and its citizens. Florida must ensure, however, that its educational resources are maximized to meet future demands. While Florida lagged behind in the per capita production of science and engineering Ph.D.s, it was twelfth in the nation in the number of per capita education doctoral degrees awarded in 1994-95 (Exhibit D-7, Education Doctoral Degrees Granted by Select States). In other words, the State awarded 146 percent of the national average in education doctoral degrees that year. Almost one-third of blacks who received a doctorate from the SUS in 1994-95 earned their degree in education. Yet, from 1992-1995, of the 142 Ph.D.s in engineering awarded by the SUS, 12 went to blacks and six to Hispanics. Of the 165 Ph.D.s in the physical sciences, three were awarded to blacks during that time period and nine to Hispanics. One black and no Hispanics received Ph.D.s in mathematics during the three year period. Clearly, minorities are underrepresented in these lucrative disciplines. The State must maximize its monetary and human resources to expand and strengthen graduate education, particularly in high technology fields.

Recommendations:

Postsecondary institutions and sectors should increase the number of graduate students, particularly among underrepresented populations, in science and engineering through stipends, graduate fee waivers, and research and employment opportunities with state government, business, and industry.

Postsecondary institutions should collaborate with business and industry to ensure that a higher share of graduates from science and engineering fields are hired in Florida.

Research and Development

Research and Development (R&D) is sponsored by a combination of government and private funds. Like other states, most of the R&D conducted in Florida is paid for with public funds, primarily federal funds. While university research plays a key role in the state's economic development, it is industrial firms, not universities, that are the major recipient of federal support for R&D in Florida. Florida is one of the top recipients of federal R&D funding, receiving $2.4 billion in FY 1995. This represents 3.5 percent of the federal government's total funding for R&D, placing Florida seventh among the 50 states and the District of Columbia. Although Florida has experienced downsizing at its military installations and workforce, the Department of Defense (DOD) supplies over 70 percent of Florida's federal R&D funds. Defense obligations to the state, which totaled $1.75 billion in FY 1995, account for five percent of DOD's total R&D funds. In FY 1995, Florida industry received more than 65 percent ($1.6 billion) of the state's federal R&D funds. Almost 90 percent of those funds came from DOD and the National Aeronautics and Space Administration (NASA) (The Future of Science and Technology in Florida Trends and Indicators).

While the state's universities are not the primary recipients of federal R&D funds, they receive millions of dollars from federal, state, and private sources to support applied research projects. Some faculty and graduate students work on projects in collaboration with Florida industries and research laboratories. Not only do universities provide much of the discovery and know-how that fuels economic development, but they produce the state's future scientists, engineers, and technologists. Closer ties between universities and industries have led to important discoveries and product development, many with commercial potential. Yet according to data submitted by the state universities to the Board of Regents, industries in other states and in foreign countries invest more capital in research conducted by the universities than Florida industries. During 1995-96, only 20 percent of the total industry sponsored research funds provided to SUS institutions ($41.6 million) came from Florida industries (FAMU data not available).

Closer ties between universities and industries have led to important discoveries and product development, many with commercial potential.

Universities continue to be the primary bastion of basic research in the state and nation.

As noted above, university and industry applied research often leads to new product development and may be tied to a specific industry or state need. Universities, however, continue to be the primary bastion of basic research in the state and nation. Basic research is scientific inquiry that most often results in important discoveries in science, technology, and medicine, rather than in particular products and processes. The greater part of basic research is financed from public funds. The federal government has been the primary sponsor of basic research in the state's institutions. In 1995-96, the federal government provided 61 percent ($324 million) of the $528 million allotted to basic (sponsored) research in the SUS. Private sources provided 21 percent and state and local government another 18 percent.

The Department of Health and Human Services (HHS) is the largest sponsor of R&D at Florida universities, providing $115 million (44 percent of their federal R&D funds) in FY 1995.

Three of Florida's universities, the University of Florida, the University of Miami, and Florida State University, are among the top 100 university recipients of federal R&D funds. While together, the DOD and NASA account for almost 90 percent of Florida's federal R&D funds, colleges and universities in the state are more focused on health-related science and other fields of research. The Department of Health and Human Services (HHS) is the largest sponsor of R&D at Florida universities, providing $115 million (44 percent of their federal R&D funds) in FY 1995. The National Science Foundation (NSF) was second with $54 million, and the Department of Agriculture was third with $37 million for that year.

Recommendations:

Postsecondary institutions and the sector boards should seek additional financial support from business and industry partners who benefit from the intellectual resources provided by postsecondary institutions in Florida. When forming research partnerships, preference should be given to those industries that provide opportunities for graduate student training and employment.

Postsecondary institutions should develop additional, diversified sources of federal support in areas of research and development. Institutions receiving the bulk of federal support should consider working cooperatively on sponsored projects with other less well-funded SUS institutions.

Critical Problem Areas

Faculty members involved in basic or applied research, that is dependent on competitive industry or federal government funding and tied to specific goals, are more likely to be involved in research areas critical to Florida's future. While no statewide critical problems have been established for Florida's postsecondary institutions, the Florida Commission on Government Accountability to the People has established seven major issues and 60 critical measures that reflect overall quality of life in Florida. Many of those issues--safety, the economy, the environment, and health--could be adopted by postsecondary institutions as critical state needs which can be addressed through university research funded by state, national, and private sources and in partnerships with business and industry.

Recommendations:

In collaboration with postsecondary institutions, the sectors should identify needs of the State that are critical to improving the quality of life for all Floridians. The SUS should continue its strong encouragement of faculty in seeking funding for and engaging in research projects related to identified critical state needs.

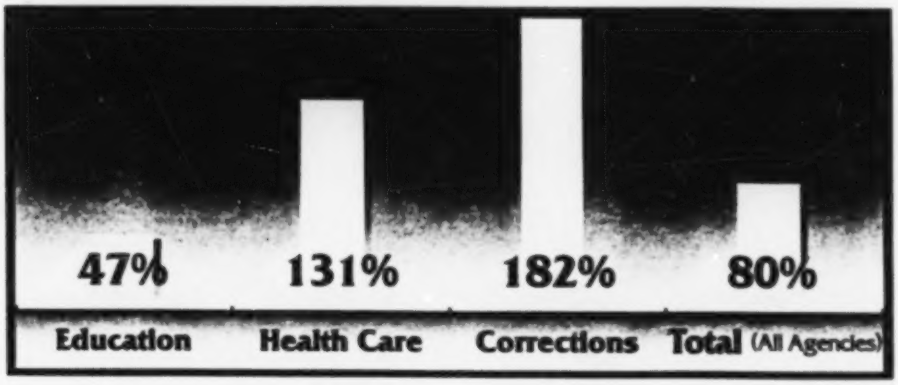
The Legislature should allocate a specific proportion of general revenue funds allotted each year to the public universities to promote private-public partnerships to conduct applied research critical to Florida's needs.

One of the laws of economics is imbedded in the cliché, "You get what you pay for." In other words, mediocrity is relatively cheap; excellence is expensive. For too long, the people of Florida seem to have operated on the assumption that public education, both K-12 and postsecondary, can be both cheap and good. The State, however, can no longer operate on that belief. Florida, now the fourth largest state in the nation, has been thrust into a leadership position which it is not fully prepared to assume mainly because its public education systems do not measure up to those of other leading states such as California, Texas, Michigan, and New York. If the very nature of the State is changing to that of a high technology headquarters for world trade, educational systems must change. The citizens of Florida must be willing to invest in our future through fair, equitable taxation to support public education at much higher levels. Our students deserve no less.

The citizens of Florida must be willing to invest in our future through fair, equitable taxation to support public education at much higher levels.

Based on recent trends, postsecondary education cannot expect to maintain current state funding per student in the face of increasing demands and rising costs of quality programs and services. For the period of 1987 through 1997, while total state general revenue appropriations for Education increased from $5.5 to $8.1 billion, Education's share of this fund source declined from 64 to 52 percent (Exhibit E-1, Legislative Appropriations--General Revenue). In contrast, General Revenue funding for Health and Social Services grew by 131 percent and almost tripled for Corrections (a 182 percent increase).

General Revenue Growth In Florida

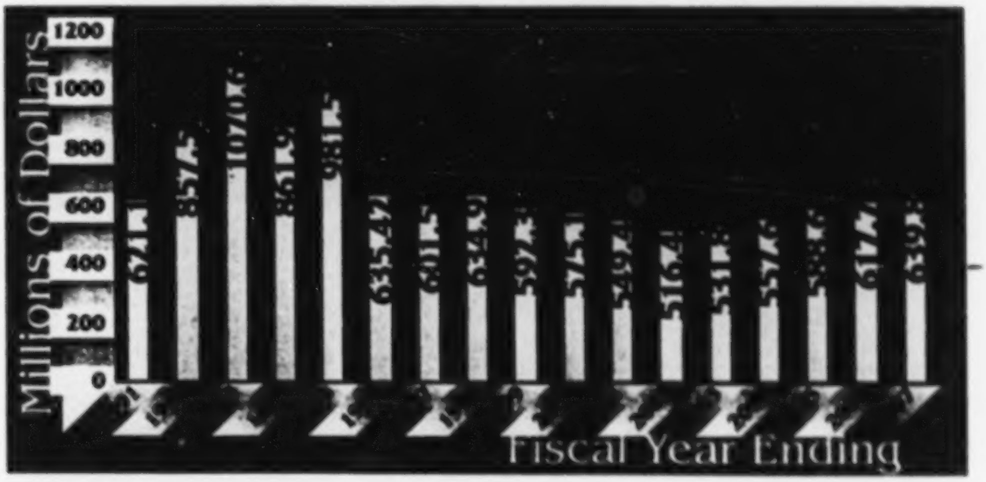


Source: Florida's Ten-Year Summary of Appropriations Data.

Postsecondary education has not been immune from this trend. In 1996-97, state universities received almost $1.3 billion in General Revenue or eight percent of the funds available. In 1987-88, they received ten percent of the total. Community colleges experienced a similar decline from five to four percent of General Revenue during this same period. When all funds, including lottery, are considered, the university share declined from six to five percent, while the community colleges remained constant at two percent (Exhibit E-2, State Appropriations--Ten-Year Summary).

In addition to the challenge of covering operating costs, Florida education faces a major demand for facility support in the years ahead. Public Education Capital Outlay (PECO) appropriations, based on revenue from the Gross Receipts Tax, have shrunk from $1 billion in 1992-93 to $601 million in 1996-97. Without adjusting the rate (2.5 percent) or scope (presently levied on telephone, gas, and electricity) of this tax, this decline is expected to continue for the next several years and then be in the half-billion-dollar range through 2006. Currently, 60 percent of these funds are allocated to public schools with the state universities and community colleges each receiving 20 percent. The Education Facilities Study Committee, reestablished by the 1994 Legislature, projected unmet capital outlay needs of approximately $5.4 billion by the year 2000 including respective shortfalls of $1.02 billion and $1.07 billion for the Community College System and State University System.

Estimated Maximum Available PECO Appropriations, FY 1990-91 To 2006-07



Source: Executive Office of the Governor, October 17, 1997

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Goal

Florida must find new ways to provide affordable access to a high quality postsecondary education, based on a fair investment by all involved--students, the state and local community, business and industry.

Accountability/Performance Funding

Since 1991, Florida has renewed its focus on accountability and performance funding, which essentially merges the concept of accountability with budget decisions. This latter concept has taken two forms: performance-based program budgeting which is used to frame overall budget requests in terms of desired outputs (e.g., graduates) and outcomes (e.g., higher average earnings); and, performance-based incentive funding which actually distributes funds based on achievement of results (e.g., x dollars per completer, x dollars per placed completer).

While the intent of these state-level initiatives is to achieve the best results as efficiently as possible (productivity), the ultimate test is the extent to which behavior at the institutional, and ultimately the student, level is positively affected. The record to date has been spotty.

The community colleges are in their second year of performance funding and are now working with area vocational centers on applying a similar approach to funding for workforce development in response to legislation enacted this year (Chapter 97-307, L.F.). The Commission's Executive Director had the opportunity to review and comment on the implementation plan for this act prior to submission to the Legislature.

The state universities have confronted the performance funding challenge through a variety of approaches, primarily in response to legislative directives, and are still seeking the best fit given their mix of missions and institutions. The most promising developments have been at the institutional level. For example, the University of Florida has guided fund allocation decisions through its Bank, a data-based productivity model focused on teaching, research, and fundraising effectiveness.

Performance funding must be limited to a small number of indicators consistently applied and used to guide rather than dictate funding.

The Commission has focused on outcomes in its review and funding recommendations for academic program contracts with independent institutions. This year it limited all new contract proposals to areas identified as priorities by the Florida Occupational Forecasting Conference.

The Commission believes that, to be effective, performance funding must be limited to a small number of indicators consistently applied and used to guide rather than dictate funding. Much can be accomplished by dedicating a relatively small percentage of the budget to actually rewarding identified results. Recognizing that "one size doesn't necessarily fit all," individual institutions should be encouraged to apply the principles of performance funding and productivity management in the manner best suited to their individual circumstances.

Recommendations:

The Legislature and the sectors should continue to focus on performance at the state level through the use of incentive funding with a limited share of the overall budget.

The Commission, in cooperation with the sectors, should recognize and reward individual institutions' efforts to apply the principles of performance funding and productivity management.

Funding for Instruction and Research

One of the objectives of the most recent performance budgeting and incentive funding initiatives at the university level has been to answer three essential questions for each of the State University System's primary functions: Instruction, Research, and Public Service. What is needed? How much does it cost? What indicators demonstrate progress in meeting the need? In 1996, the Commission recommended separating funding for research and public service from the instructional cost factors, especially at the undergraduate level. The intent of this was not to reduce funding for research. Rather, the purpose was to realign the funding process and its inherent incentives, real and perceived, with the varying missions of each state university.

The previous section of ***Challenges and Choices*** clearly recognizes the critical contribution made by research both to postsecondary education as well as to the overall well-being and competitive position of the State. Individual institutions with a major research focus should not have to grow substantially at the undergraduate level to generate sufficient resources to support their graduate education and research functions. While it is reasonable to expect some research activity in all universities, resources provided for this function should reflect the level of instruction and research activity in place. The Ph.D. degree is a research degree and requires the highest level of faculty research. Master's level instruction requires faculty research, but probably to a lesser extent, and bachelor's level even less.

In 1986, the Commission recommended that SUS cost accounting procedures differentiate between doctoral and master's program costs. The 1997 Legislature, in proviso language accompanying Specific Appropriation 186 in the General Appropriations Act, directed the Board of Regents to revise the Enrollment Funding Model to reflect the cost per FTE student at the lower level; the upper level; the graduate level, separating out master's, Ph.D., and the medical professional level; and other appropriate divisions. If Florida is to build a system distinguished by the unique strengths of its individual institutions, it is time to appropriate funds as well as report costs in accordance with their various missions. An internal study done by the Board of Regents in

September 1997, in response to the proviso language, produced the following cost figures by level, including a ten percent adjustment for research across the board: Lower--$5,922, Upper--$8,153, Graduate I (Master's)--$12,968, and Graduate II (Ph.D.)--$21,028.

If the state funding formula were to fund research as ten percent of undergraduate instructional positions, 15 percent of Graduate Level I (Master's) instructional positions, and 20 percent of Graduate Level II (Ph.D.) instructional positions, this would result in a reduced cost for one FTE undergraduate student of $7,255 and a somewhat higher cost for one Graduate Level I FTE of $14,652, and one Graduate Level II FTE of $30,064. These numbers contrast with current expenditure of $9,361 for an undergraduate FTE and $14,519 for a graduate FTE. An approach that differentiates among all major instructional levels would be a more accurate reflection of both current expenditures as well as the actual cost impact of proposed new programs.

If Florida is to build a system distinguished by the unique strengths of its individual institutions, it is time to appropriate funds as well as report costs in accordance with their various missions.

The success of any funding methodology will be dependent upon rigorous review by the Board of Regents of proposed new programs to ensure consistency with institutional missions. Another mechanism for encouraging mission differentiation is the use of incentive funding. A number of states, including Texas, South Carolina, Kentucky, Illinois, and Nebraska, award research dollars in proportion to an institution's ability to generate external or sponsored-research funding. As a supplement to the funding methodology, this approach would include all institutions but would reward those that are most successful in the increasingly competitive field of obtaining external support for research.

Recommendations:

> The Legislature and the Board of Regents should adopt a revised university funding methodology that more accurately reflects the level of research and instruction provided by each institution in accordance with its individual mission. This funding methodology should distinguish costs for lower and upper level undergraduate instruction as well as master's, doctoral, and professional.
>
> As a supplement to the adopted funding methodology, the Legislature and the Board of Regents should establish an incentive grant fund that would recognize and reward individual institutional success in obtaining external research support.

Public Education Capital Outlay (PECO)

Each sector's share should take into account current need and future enrollment.

Last year, in an attempt to deal with public school overcrowding, the Governor's Commission on Education recommended broadening the gross receipts tax to include cable, water, sewer and solid waste. It was anticipated that this would provide an additional $1 billion in PECO bonding authority over the next five years. The 1997 Legislature did not act on this recommendation. The Governor's Commission was subsequently expanded to include legislative representatives and has recently adopted a recommendation to the Governor and Legislature. The Commission's report states that facilities needed for public schools alone will require an additional $3.3 billion over the next five years. Estimates by the House and Senate are somewhat lower--$775 million and $1.5 billion respectively. The Commission has developed accountability measures for the use of these funds as a prelude to the identification of additional revenue for PECO. The Governor's Commission believes that capital outlay is a shared responsibility and proposes both increased state funding as well as greater use of local resources, ranging from a half-cent sales tax surcharge to video lottery games. The Commission calls for a reassessment and long-term replacement of the gross receipts tax, given deregulation of electric and natural gas utilities. Finally, the Commission recommends that, once the current public school unmet need is addressed, 60 percent of future PECO revenue be divided evenly between state universities and community colleges (presently each of these sectors receives 20 percent, although in the past, 100 percent of these funds went to postsecondary education). This work, acted upon during the November Special Session of the Legislature, should serve as an excellent foundation for replication at the postsecondary level. The Postsecondary Education Planning Commission agrees that a greater share of PECO funds should be directed to postsecondary education but believes that each sector's share should take into account current need and future enrollment rather than simply being divided in half.

Recommendations:

The Governor's Commission on Education should examine facility needs at the public postsecondary level, taking into account existing capacity, need for additional space, maintenance and repair, accountability, and either expansion of current fund sources or identification of new sources of support.

Once public school facility needs are addressed, the Legislature should implement the Governor's Commission on Education recommendation that a majority (at least 60 percent) of PECO funding go to the postsecondary level. Each sector's share of the increase should be based on future enrollment and unmet need.

Tuition and Financial Aid

At $1,994 in 1997-98, resident tuition in the state universities ranked 49th in the country or 56.7 percent of the national average of $3,515. Tuition and fees for community college students were $1,225 in 1997-98, 81.8 percent of the national average of $1,498 and down slightly from 1993-94 when Florida's community college resident fees were 83.5 percent of the national average (Exhibit E-3, Community College Student Fees, Florida Compared to National Average).

The original ***Master Plan*** recommended that tuition be indexed to state general revenue appropriations to permit students, parents, institutions, and the state to plan on expected tuition levels. This concept of students paying a specific share of the cost of their education was based, in part, on the 1973 Carnegie Commission on Higher Education recommendation that students pay one-third of educational costs at four-year institutions. In 1991, the Florida Legislature adopted policy to index postsecondary fees charged by school districts, community colleges, and universities to prior year program costs. For community college and undergraduate university academic programs, the fees are to be 25 percent of cost. The current definition of cost is limited to operating expenditures and does not include capital outlay; however, in a recent cost-benefit analysis of the Florida Resident Access Grant, the Commission added a ten percent factor to approximate the impact of capital outlay on instructional costs and believes this factor should be considered in future calculations.

Even with the increases required by implementation of the indexing policy, Florida remains a low-tuition state. This has not always been the case. In 1967-68, the average annual tuition cost for a four-year college was $302 nationally, $296 in Southern Regional Education Board (SREB) states, and $375 in Florida (124 percent of the national average).

While Florida's state universities have the potential to adjust charges within ten percent of the system standard, this has never been authorized by the Legislature. Exhibit E-4, Change in Major State University Tuition and Fees, illustrates that among all major public universities, Florida ranks last in tuition growth over the past 16 years. Implementation of the range would be an appropriate step in allowing institutional pricing to reflect market forces. This conclusion stems from consideration of the following points:

- There would be the possibility of more revenue from tuition.
- This option would provide more local control over the expenditure of money since the tuition revenue would be seen not as state but institutionally controlled revenue.

- A possible disadvantage is that institutional funding would be more dependent on enrollment numbers. Only the more selective or popular universities would be able to charge higher tuition.

- On the other hand, more students may be attracted by lower tuition to the other universities with the increased numbers of students resulting in a larger marginal gain in revenue over cost.

- Competition for students could increase with low tuition used as a marketing tool. This competition could occur within the different segments and cross sectors, such as between public and private colleges.

- Institutions would be pressed to improve their instructional services in exchange for higher student tuition to remain competitive with other institutions and to justify the increased cost to the students.

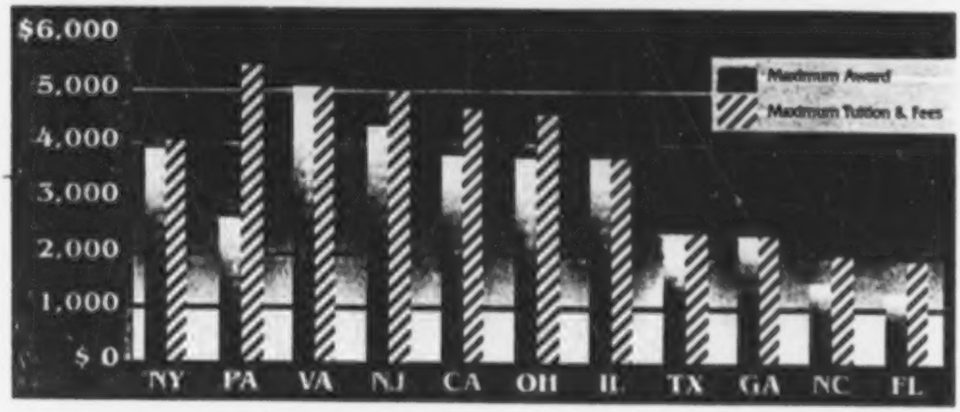
- The level of tuition and the use of these funds would be an institutional, not a legislative, matter.

Low tuition is not an efficient form of financial aid.

Increasing tuition to the national average would annually generate an additional $211 million for State University System undergraduates and $57 million for community college students enrolled in credit programs.

The Commission has consistently held that low tuition is not an efficient form of financial aid because it subsidizes all students regardless of ability to pay. The Commission, the Board of Regents, and the State Board of Community Colleges have all recommended that the public postsecondary sectors raise their tuition charges to the national average. Unless there is a massive increase in state funding for postsecondary education, the 25 percent cap on the share of costs borne by students will prevent tuition from reaching the national average in the foreseeable future. It may be time to revisit this cap which is even lower than that recommended by the Carnegie Commission. Dividing the national average tuition for 1996-97 ($3,360) by the SUS allocation per FTE ($8,282) for that year yields a figure of 40 percent, not an unreasonable share for students to cover given the significant benefits of postsecondary education. Increasing tuition to the national average would annually generate an additional $211 million for State University System undergraduates and $57 million for community college students enrolled in credit programs. Furthermore, since tuition represents less than 20 percent of the overall cost of attendance for residential students, provision for adequate student financial assistance is critical; Florida ranks low in this area as well. To ensure access, the Commission has also recommended that at least 25 percent of any tuition increase be dedicated to need-based financial assistance. This would generate $52.75 million and $14.25 million for the State University System and Community College System respectively or $67 million collectively.

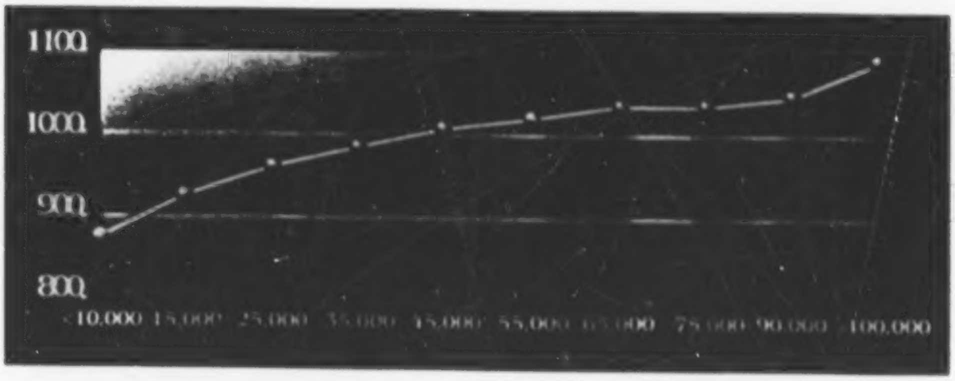
Maximum Award Under State Need-based Grant Program Compared To Maximum Tuition And Fees In Public Four-year Institutions, Selected States, 1995-96



Source: Postsecondary Education Planning Commission.

Adequate need-based aid is a continuing cause for concern as the chance of reaching college differs dramatically by family income--nearly 86 percent for those above $75,000 and 28 percent for those below $10,000 (see **Outcomes**, Chance for College Among 18-24-Year-Old Dependent Family Members by Family Income, 1995, p. 31). At the same time, SAT scores closely relate to family income, so those qualifying for Florida's new Bright Futures Scholarship are more likely to be found in the higher income bands.

SAT Score By Family Income



Students qualifying for Florida's Bright Future Scholarship are more likely to be found in the higher family income levels.

Family income level is the mid-point of each range.
Source: Florida Department of Education, August 1996.

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The Commission has continually encouraged both need and merit to be considered in the distribution of aid.

This conclusion is not intended to place merit aid in opposition to need-based aid. An estimated 12 percent of the $75 million provided in the first year of the Bright Futures Program is to be awarded to students with financial need. Consideration of merit certainly makes sense if Florida wishes to keep in the state those students likely to benefit from an opportunity for postsecondary education. What the Commission has continually encouraged is for both need and merit to be considered in the distribution of aid. The Department of Education's 1998-99 budget request does this by increasing support for Bright Futures but restoring the primacy of need-based aid so that it will represent 51 percent of state financial aid resources overall (up from 42 percent this year) (Exhibit E-5, Need-Based vs Merit-Based Student Aid Programs, 1998-1999 Budget Request). While the 1998-99 request is a positive step, past appropriations for need-based aid have not kept pace with either the number of eligible applicants or the extent of their need. This has resulted in the necessity to prorate individual student awards downward.

Recommendations:

> The Legislature should allow the sector boards to move Florida from a low tuition/low aid state to at least the national averages in these areas. The share of educational costs borne by students should not exceed 40 percent. The percentage of state revenue dedicated to postsecondary education must not be further reduced or replaced by any revenue resulting from increased tuition. An amount equal to at least 25 percent of any tuition increase should be dedicated to need-based financial assistance.
>
> All applicants for any state student financial assistance should submit need analysis data. The Department of Education and the sector boards should base future requests for need-based aid on the number of eligible applicants, taking into account tuition increases and other factors affecting the extent of need.

Supplemental vocational training is another area where the concept of fair investment by all involved warrants examination. By definition, this is training related to the upgrading or updating of skills of current employees. For years, the state has provided the major share of the cost of such training delivered through school districts and community colleges. The 1997 Legislature required that the cost be covered evenly from state and local resources. The Commission believes that the cost of such training should be shared but that the contributors should be the employees and employers who are the direct beneficiaries of such training.

Recommendation:

> The Legislature should require that supplemental vocational training be self-supporting with the costs borne by the employers and employees who are involved.

Established in 1988, Florida's Prepaid Tuition Program is the largest initiative of its kind in the country. Over 425,000 contracts have been sold and assets currently exceed $1 billion. Essentially, the Program permits purchasers to lock in today's tuition rates for future students. Over 30,000 participants are enrolled in the public sector this year. There has been concern that the program is accelerating demand for postsecondary education. For example, current prepaid contract holders indicating a preference for the State University System through 2006 total over 213,000, roughly equivalent to the total enrollment in that system. Data on what proportion will actually qualify, or if qualified choose to attend, are limited.

Income information on contract purchasers is also incomplete (56 percent). Of those reporting, eight percent earn less than $20,000 while 29 percent earn more than $50,000. These statistics are complicated by the fact that a number of purchasers are grandparents or other relatives and not reflective of the beneficiary's family income. The ability to make relatively low monthly installments (a two-year community college plan can be as low as $11 a month for a newborn) puts the program within reach of most Floridians, but it continues to attract more participants from the middle and upper income bands. Project STARS (Scholarship Tuition for At-Risk Students), an outreach component of the Prepaid Program, has provided tuition and mentoring support to 9,000 low-income students since its inception. This program received $3 million from the 1997 Legislature and could easily match three times this amount in private donations.

Project STARS, an outreach component of the Prepaid Program, has provided tuition and mentoring support to 9,000 low-income students since its inception.

The Prepaid Program has been well marketed and well run and is an excellent tool for encouraging Floridians to plan for college costs, however, it should not become a major factor in determining the state's future tuition policy. In fact, this has not occurred to date. In the seven years preceding creation of the Prepaid Program, state university matriculation averaged annual increases of 7.27 percent. Since the inception of the program, matriculation increases have averaged 7.39 percent (Exhibit E-6, State University System of Florida, State-Required Fees, 1974-1996). The program represents that it has earned sufficient investment allocations to accommodate fee increases higher than the program's current projections. As the program grows, so will its potential impact on restraining tuition increases; however, the program now has several hundred million dollars in reserve and can adjust its rates to accommodate future tuition increases.

The Prepaid Program should not become a major factor in determining the state's future tuition policy.

Currently, the Prepaid contracts cover matriculation, building, capital improvement, and financial aid fees but do not include local activity and service, health, and athletics fees. Local fees now account for approximately $14 a credit hour or 25 percent of university student charges. The Prepaid Board is currently studying the feasibility of covering these fees. The Commission believes purchasers should be given this option.

The impact of recent Federal legislation on Florida's program remains to be seen. Whether the new Education IRAs and other provisions such as education tax credits, student loan interest deductions, and continuation of the income-exclusion for employer-provided education will reduce its attractiveness should become clearer after the next enrollment period.

Recommendations:

The Legislature should extend the Florida Prepaid College Program's coverage to include local fees and other federally authorized college costs. In addition, the Legislature should provide funding that will enable the Program to match additional private-sector donations to increase Project STARS outreach to lower income students. The future role and scope of the Prepaid Program should be examined by its Board and the Legislature in light of recent federal legislation authorizing additional savings and tax credit options.

The Florida Prepaid Tuition Program must not become a major factor in determining the state's future tuition policy. The Legislature should not constrain its tuition decisions based on the actuarial projections of the Prepaid Program since the program has a variety of options available for addressing tuition increases that exceed the current rate projections.

Support for the Independent Sector

Florida is a leader in the provision of state support to independent postsecondary institutions (over $73 million in direct and indirect support during 1996-97). The Florida Resident Access Grant (FRAG), designed to narrow the tuition gap between public and independent institutions, provides $28 million to over 16,900 Florida residents in eligible, regionally accredited baccalaureate granting independent colleges and universities. The goal of the Independent Colleges and Universities of Florida (ICUF) is to raise the value of the maximum award from $1,600 this year, to $3,000 over the next three years. As with need-based aid, the number of eligible FRAG recipients has exceeded the figure anticipated in the budget in some years, necessitating a reduced award for individual students.

In addition to academic program contracting, which provides student access to high demand programs (engineering, nursing) at selected independent institutions, the state provides direct institutional support (e.g., The Medical School and Rosenstiel School of Marine and Atmospheric Sciences at the University of Miami) similar to New York state's support for selected colleges and programs at Cornell, Alfred, and other independent institutions. This approach could be extended to include complete programs at Florida's independent institutions when the cost of replication in the public sector is not supportable.

The Commission has supported the expansion of these funding strategies to include technical training offered by licensed independent schools, institutes, and colleges. Contracting for spaces in high wage, high demand fields in which program graduates are subject to external validation or licensure represents a potentially cost-effective component of Florida's workforce development strategy.

Contracting for spaces in high wage, high demand fields in which program graduates are subject to external validation or licensure represents a potentially cost-effective component of Florida's workforce development strategy.

In 1988, the Commission recommended and the Legislature enacted the Postsecondary Endowment Grant Program (s. 240.609, F.S.). The Program would provide matching grants to eligible institutions, increasing their endowments from private sources. To date, the program has not been funded. It continues to represent a potential avenue for encouraging increased private support for the independent sector, similar to the Eminent Scholar, and matching gift programs established for the State University System.

Finally, in recognition of the important role played by independent institutions in providing access, it is time to consider their inclusion in the Enrollment Estimating Conference. This is a consensus process involving representatives of the Executive Office of the Governor, the Legislature, and the sector boards in projecting enrollment workload and the amount needed for support for public education. Involvement of the independent sector in this process should provide a stronger basis for determining the necessary funding level for the FRAG as well as need-based student assistance and assist in avoiding the need for proration of the value of individual awards in the future.

Recommendations:

The State should continue to invest in the Florida Resident Access Grant as well as other programs that will maximize the contribution of independent postsecondary education to Floridians.

The principals involved in the Education Estimating Conference conducted pursuant to s. 216.136(4), F.S., should include the independent sector in the enrollment estimating process in recognition of the important role these institutions play in providing access.

The process used to estimate and fund FRAG recipients as well as candidates for need-based student assistance should be comparable to that used to calculate enrollment workload funding for state universities and public community colleges.

Challenges and Choices

Challenges and Choices focuses on major issues confronting our state as we approach the millennium. The Commission believes that the State and the postsecondary education community cannot choose to address the future without a change in the way we approach the access and delivery of postsecondary education. Business as usual is not an option. This ***Master Plan*** has identified the following goals for postsecondary education:

- Florida postsecondary institutions must focus on their individual strengths while enabling the system as a whole to adjust to the demands of the new economy.
- Florida must provide increased opportunities for access to higher education.
- Florida must increase the productivity of the postsecondary educational system.
- Florida must use educational and telecommunications technologies to improve student learning, access to the associate and baccalaureate degrees, and overall institutional efficiency.
- Florida must provide a seamless system of quality education for its residents from pre-kindergarten through graduate school and beyond.
- Florida schools must employ competent and caring teachers who have the knowledge and skills needed to meet the diverse needs and to optimize the achievement of their students.
- Florida must produce an educated populace prepared to use intellectual resources in the workplace and to advance the economic and social conditions of the State.
- Florida must increase the postsecondary education attainment of Floridians to meet workforce demand and to provide the intellectual resources for knowledge-based employment.
- Florida must promote discovery and application of knowledge to improve its position in the interdependent global economy.
- Florida must find new ways to provide affordable access to a high quality postsecondary education, based on a fair investment by all involved--students, the state and local community, business and industry.

The State and the postsecondary education community cannot choose to address the future without a change in the way we approach the access and delivery of postsecondary education.

None of these goals will be easy to attain. ***Challenges and Choices*** addresses these goals and is designed to assist the State Board of Education, the Legislature, the sector boards, institutions, and all others involved in postsecondary education in selecting the strategies and actions that will best serve our state in the years ahead.

Conclusion

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Appendix A

Introduction

Appendix A

Exhibit

Racial/Ethnic Percentage Distribution 1992-93 Florida Public High School Graduates and 1994-95 Public Postsecondary Degree Recipients

	White	Black	Hispanic	Other
1992-93 High School Graduates	65%	20%	12%	3%
1994-95 CC A.A. Degrees	76%	7%	12%	5%
1994-95 SUS Baccalaureate Degrees	73%	10%	11%	6%
1994-95 SUS Master Degrees	74%	7%	7%	12%
1994-95 SUS Doctoral	63%	6%	3%	29%
1994-95 SUS Professional	77%	11%	6%	6%

Source: State University System and State Board of Community Colleges, Fact Books and Accountability Reports.

Exhibit

Enrollment, Institutions, and Degrees Granted At Four-Year Institutions Per 100,000 18-44-Year-Old Population, 1994-95

	Enrollment			Institutions			Baccalaureate Degree
State*	Public	Private	Total	Public	Private	Total	
Florida	2,962	1,383	4,345	0.17	1.05	1.22	844
Texas	4,222	977	5,199	0.51	0.73	1.24	895
Washington	3,128	1,126	4,254	0.35	1.01	1.36	963
California	2,759	947	3,706	0.22	1.15	1.37	795
Georgia	4,102	1,418	5,520	0.61	1.16	1.77	850
Michigan	4,918	1,784	6,702	0.38	1.43	1.81	1,128
North Carolina	4,201	1,744	5,945	0.57	1.34	1.91	1,079
Wisconsin	5,731	2,018	7,749	0.62	1.40	2.02	1,301
Ohio	4,732	2,053	6,785	0.53	1.50	2.03	1,096
Illinois	2,938	2,376	5,314	0.25	1.88	2.13	1,068
Indiana	6,496	2,192	8,688	0.59	1.68	2.27	1,267
New York	3,689	3,831	7,520	0.56	2.27	2.83	1,237
Pennsylvania	3,961	3,453	7,414	0.94	2.12	3.06	1,321
West Virginia	7,936	1,456	9,392	1.83	1.41	3.24	1,217

*States are sorted from lowest to highest number of total institutions.

Source: U.S. Census Bureau, *Statistical Abstract*, 1995
NCES, *Digest of Education Statistics*, 1995 and 1997.

Exhibit

Distribution of Enrollment in Public Four-Year Institutions of Higher Education, Fall 1994

United States

Distribution by Number of Students

Institution Size	# of Students	Percent	Cumulative
0-200	0	0%	0%
200-499	4,002	0%	0%
500-999	20,036	0%	0%
1,000-2,499	142,576	2%	3%
2,500-4,999	409,917	7%	10%
5,000-9,999	1,071,457	18%	28%
10,000-19,999	1,849,658	32%	60%
20,000-29,000	1,521,003	26%	86%
30,001+	806,564	14%	100%
Total	5,825,213		

Florida

Distribution by Number of Students

Institution Size	# of Students	Percent	Cumulative
0-200	0	0%	0%
200-499	0	0%	0%
500-999	0	0%	0%
1,000-2,499	0	2%	3%
2,500-4,999	0	7%	10%
5,000-9,999	27,143	14%	14%
10,000-19,999	17,367	9%	22%
20,000-29,000	80,197	41%	63%
30,001+	73,224	37%	100%
Total	197,931		

Distribution by Number of Institutions

Institution Size	# of Institutions	Percent	Cumulative
0-200	0	0%	0%
200-499	10	2%	2%
500-999	26	4%	6%
1,000-2,499	84	14%	20%
2,500-4,999	114	19%	39%
5,000-9,999	150	25%	64%
10,000-19,999	132	22%	86%
20,000-29,000	62	10%	96%
30,001+	21	4%	100%
Total	599		

Distribution by Number of Institutions

Institution Size	# of Institutions	Percent	Cumulative
0-200	0	0%	0%
200-499	0	0%	0%
500-999	0	0%	0%
1,000-2,499	0	2%	3%
2,500-4,999	0	7%	10%
5,000-9,999	3	33%	33%
10,000-19,999	1	11%	44%
20,000-29,000	3	33%	78%
30,001+	2	22%	100%
Total	9		

Average size of Public Four-Year Institution in U.S.

9,725

Average size of Public Four-Year Institution in Florida

21,992

Source: 1996 Digest of Education Statistics; 1995-96 State University System FactBook.

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Exhibit

Distribution of Enrollment in Public Two-Year Institutions of Higher Education, Fall 1994

United States

Distribution by Number of Students

Institution Size	# of Students	Percent	Cumulative
0-200	739	0%	0%
200-499	10,661	0%	0%
500-999	67,412	1%	1%
1,000-2,499	440,848	8%	10%
2,500-4,999	895,323	17%	27%
5,000-9,999	1,522,559	29%	55%
10,000-19,999	1,582,189	30%	85%
20,000-29,000	627,988	12%	96%
30,001+	189,609	4%	100%
Total	5,337,328		

Florida

Distribution by Number of Students

Institution Size	# of Students	Percent	Cumulative
0-200	0	0%	0%
200-499	0	0%	0%
500-999	0	1%	0%
1,000-2,499	3,264	1%	1%
2,500-4,999	13,826	4%	5%
5,000-9,999	64,928	20%	25%
10,000-19,999	80,952	25%	50%
20,000-29,000	113,831	35%	85%
30,001+	48,232	15%	100%
Total	325,033		

Distribution by Number of Institutions

Institution Size	# of Institutions	Percent	Cumulative
0-200	5	1%	1%
200-499	31	3%	4%
500-999	87	9%	12%
1,000-2,499	251	25%	38%
2,500-4,999	259	26%	64%
5,000-9,999	214	22%	85%
10,000-19,999	115	12%	97%
20,000-29,000	27	3%	99%
30,001+	5	1%	100%
Total	994		

Distribution by Number of Institutions

Institution Size	# of Institutions	Percent	Cumulative
0-200	0	0%	0%
200-499	0	0%	0%
500-999	0	1%	0%
1,000-2,499	2	7%	7%
2,500-4,999	5	18%	25%
5,000-9,999	9	32%	57%
10,000-19,999	6	21%	79%
20,000-29,000	5	18%	96%
30,001+	1	4%	100%
Total	28		

Average size of Public Two-Year Institution in U.S.

5,370

Average size of Public Two-Year Institution in Florida

11,608

Source: 1996 Digest of Education Statistics; 1996 State Board of Community Colleges Fact Book.

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Exhibit

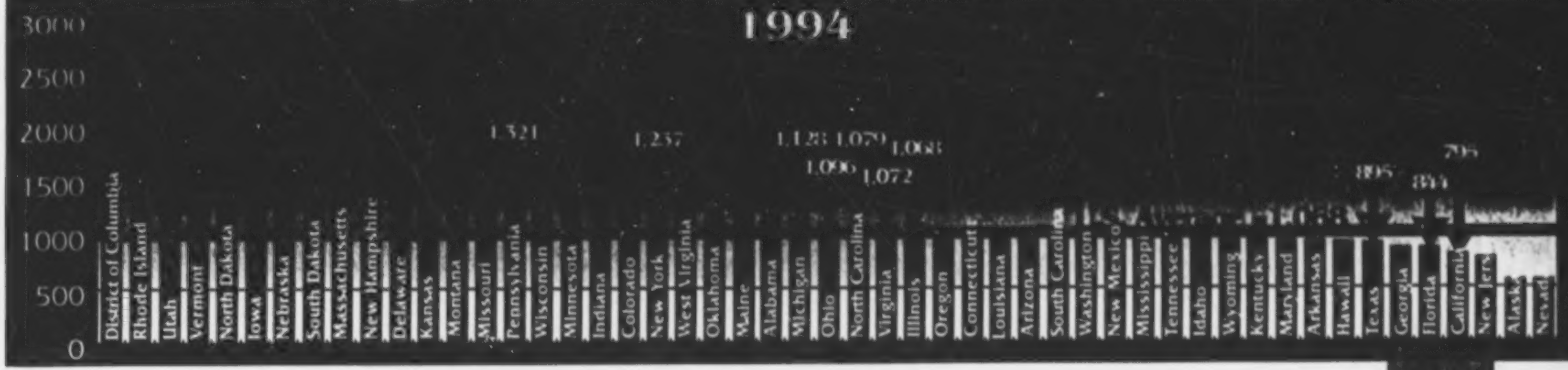
Florida Population Growth, 1985-2010 (Projected)

Fall	Spring High School Grad	Total Florida Population	0-44 Florida Population	45+ Florida Population	18-44 Florida Population	18-24 Florida Population	25-44 Florida Population	0-17 Florida Population	25+ Florida Population
1980	87,826	9,747,000	5,950,190	3,796,810	3,590,305	1,139,969	2,450,336	2,359,885	6,247,146
1995	90,062	14,082,274	8,570,563	5,511,711	5,369,987	1,242,877	4,127,110	3,200,576	9,638,821
1980 to 1995	2.5 %	44.5 %	44.0%	45.2%	49.6%	9.0%	68.4%	35.6%	54.3%
1995	90,062	14,082,274	8,570,563	5,511,711	5,369,987	1,242,877	4,127,110	3,200,576	9,638,821
2010	126,561	17,958,400	9,445,116	8,513,284	5,647,507	1,604,536	4,042,971	3,797,609	12,556,255
1995 to 2010	40.5%	27.5%	10.2%	54.5%	5.2%	29.1%	-2.0%	18.7%	30.3%

Source: Department of Education, December 1997; Demographic Estimating Conference, April 1997.

Exhibit

Baccalaureate Degrees Granted per 100,000 18-44-Year-Old Population
1994



Source: U.S. Census Bureau, Statistical Abstract, 1995;
NCES, Digest of Education Statisitics, 1997

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Appendix B

Access Responses--
MGT of America, Inc

Assessment Of Potential Responses To Address Projected Enrollment Growth In Florida Higher Education

1.0 Introduction and Background

Enrollment in Florida higher education has grown significantly over the past few decades. Between 1970 and 1995, total statewide headcount enrollment (including the State University System, community colleges, and private institutions) grew by nearly 400,000, from 235,525 to 629,395 students.

This significant growth is expected to continue. Projections by Florida Postsecondary Education Planning Commission staff estimate that the total statewide headcount enrollment in 2010 will be 888,141, an increase of 258,746 (+41%) over 1995 levels. In September 1997, MGT of America, Inc., was retained to review and update the PEPC staff estimates as well as to assess several possible responses to this projected enrollment growth in order to meet the need for baccalaureate-level instruction. As presented to the Commission in October, our review of the PEPC staff estimates verified the data and methodology used by the staff and confirmed that a projected enrollment growth in the 250,000 student range was reasonable and supportable.

The purpose of this paper relates to the second part of our assignment: the explication and assessment of possible responses by the state to this projected enrollment growth in order to address the increased demand for baccalaureate-level instruction. The paper has four sections:

- a brief description of several possible responses;
- a discussion of the criteria employed in evaluating these responses;
- an evaluation of the responses according to the stated criteria;
- a summary and conclusion.

2.0 Description of Possible Responses

There are six possible responses to enrollment growth included in this assessment:

- ***Increase enrollment at each existing SUS institution.*** This response would simply accommodate a significant portion of the projected enrollment growth by allowing growth at the 10 existing universities. Three variants on this response are considered:
  - *Increasing enrollment at each SUS institution according to its current proportion of total system enrollment.*
  - *Increasing enrollment at each SUS institution by an equal number of students.*
  - *Allowing each SUS institution to grow to a "maximum" enrollment level with remaining demand distributed to the other universities.*

- ***Establish a state college system.*** This response would entail the establishment of a "middle tier" system of public colleges in Florida that would focus solely on the provision of baccalaureate-level instruction.

- ***Authorize community colleges to offer selected baccalaureate degrees.*** This response would add upper level instruction at the community colleges in selected fields leading to the baccalaureate.

- ***Increase the number of joint-use facilities at community colleges.*** This response would involve the establishment of additional "joint use facilities" at community colleges that would allow students to take both community college and state university courses on site. Two variants on this response are considered:
  - *Expanding the current joint use facility model, which has similar operating costs to the responses that expand SUS enrollment.*
  - *Implementing a "modified joint use facility" model that would have faculty with increased teaching loads and similar operating costs to the state college model.*

- ***Increase the state subsidy to in-state students attending Florida private institutions.*** This response would entail an increase in the Florida Resident Access Grant (FRAG) from its current level ($1,600 per year) to encourage more Florida residents to attend in-state private institutions.

- ***Increase the use of distance learning and instructional technology.*** This response would seek to increase access to higher education via expanded use of distance learning and instructional technology.

The term "response" rather than "option" has been specifically used here because these are clearly not mutually exclusive ways of addressing the projected enrollment growth. In fact, no single response is likely to be adequate to meet the need. The state will need to use a combination of these responses to meet enrollment demand.

3.0 Description of Assessment Criteria

Given the magnitude of this policy issue, it is clear that no single criterion is sufficient for evaluating the overall appropriateness of the aforementioned responses to projected enrollment growth. We have included seven criteria in our assessment of the responses:

> ***Capacity.*** To what extent does the response increase the state's overall enrollment capacity?
>
> ***Baccalaureate Production.*** To what extent does the response improve the state's overall level of baccalaureate production?
>
> ***Cost.*** What are the start-up, capital, and annual operating costs incurred through each response?
>
> ***Accreditation Requirements.*** Does the response result in an impact on existing or future accreditation requirements?
>
> ***Time to Implementation.*** How much time will be required to implement the response in order to begin addressing enrollment demand?
>
> ***Flexibility.*** If deemed necessary, to what extent does the response allow the state to change direction once underway?
>
> ***Geographic Access.*** To what extent does the response improve geographic access for Florida residents?

Some of these criteria lend themselves to a quantitative basis for evaluation while others involve a more qualitative application. Further, some of these criteria require that certain assumptions be made in order to conduct the analysis.

4.0 Assessment of Potential Responses

The following several subsections present our assessment of the potential responses to enrollment growth according to each of the seven criteria listed in Section 3.0.

Capacity

Exhibit B-1 shows the additional headcount and FTE enrollment capacity gained by each of the potential responses. As indicated, the first response (increasing enrollment at SUS institutions) has been broken out into the three subresponses previously described.

The assumptions underlying each response are shown in italics in the exhibit. They are described below:

- For the purposes of this analysis, we assume that 75,000 of the projected growth in headcount enrollment through 2010 would be accommodated by the SUS. This is based on a continuation of the total average annual headcount student growth experienced by the SUS between Fall 1990 and Fall 1997 (5,200 students per year) plus growth by Florida Gulf Coast University (FGCU) to 10,000 students by the year 2010.

- We assume that one-half of the projected enrollment growth could be accommodated by the establishment of a state college system. The basis for this assumption is that there will be **at least** a five-year start-up period for this system where no students could be served by this response. According to the incremental annual projections from the PEPC staff model, at least half of the total projected increase will have already entered the system by 2003 and, thus, could not be accommodated by this response.

- We assume that 25 percent of the current credit headcount at Florida community colleges would go on to continue their studies in selected baccalaureate programs to be established at community colleges. This proportion is based on the actual experience of two public institutions in other states that have implemented such programs (Clayton State College in Georgia; Utah Valley State College in Utah).

- We assume that 14 additional joint use facilities would be established at community colleges in the state and that these facilities could attract 500 students each. This number is consistent with current enrollment patterns in joint use facilities.

- We assume the number of additional students (30,000) that ICUF has suggested.

- We assume that 25 percent of the projected growth could be served by distance learning and instructional technology and that as many as one-quarter of that number would be served solely through these mechanisms (i.e., 6% of the total). The 25 percent ratio is based on the goal set by Florida Gulf Coast University in terms of the number of students it seeks to serve through distance learning. Further, we assume that only a fraction of this number would solely be taking courses via technology. Many of the students taking courses via technology would also likely be enrolled on a campus somewhere in the state.

Under these assumptions, it is clear that the greatest additional enrollment capacity is gained through the establishment of a state college system, authorizing community colleges to offer selected baccalaureate programs, and/or expanding the SUS institutions. We should note that the estimate derived for the community college option that is shown in this exhibit is based on the current credit headcount at community colleges in the state and does not assume any additional growth at the lower division for community colleges beyond current levels. If there were additional growth at the lower division, the ultimate number of students going on to upper division programs at the community colleges would likely increase as well.

Exhibit B-2 shows the enrollment effect of the three subresponses expanding SUS institutions. Growing the institutions proportionately would result in two of the SUS institutions exceeding 40,000 students in total (instead of one now), and three institutions nearing 40,000. As a point of reference, this response would make University of Florida the single largest institution in the country. The other two subresponses have slightly different impacts. For our purposes, we assume that 45,000 would be the maximum enrollment level desired at any SUS institution which results in two SUS institutions reaching this level (UF and USF), and FSU and FIU exceeding 40,000 students in total.

The remaining responses would likely serve only a marginal number of the additional students projected through the year 2010, ranging from 7,000 via joint use facilities to 30,000 at private institutions.

Baccalaureate Production

Exhibit B-3 shows the projected additional degrees produced by each of the responses given the respective enrollment capacity gained. The assumptions underlying the degree production are shown in italics. As indicated, we assume that the current SUS graduation rate will continue, which would result in 42,000 additional degrees if the SUS were increased by 75,000 students. We also assume that students entering the state college system would have a similar graduation rate to those students entering the SUS (excluding those at UF and FSU), which would result in 55,000 additional degrees if half of the projected growth in enrollment were absorbed by this system.

For the two options involving community colleges (#3 and #4a/#4b), we assume that the additional students accommodated would graduate at the same rate as those students who transfer into the SUS after receiving their associate degrees. The wide disparity in the number of degrees produced by these two options are a function of the equally wide disparity of enrollment capacity provided.

Assuming the current graduation rate for Florida private institutions continues, an additional 30,000 students enrolling at these institutions would yield over 5,100 additional degrees. This relatively small number of additional degrees is based on the current assumption that while private institutions would be taking 30,000 additional Florida residents, only 10,000 of these would be "new" students over and above current enrollment levels. The remaining 20,000 would be in lieu of nonresident students currently enrolled in ICUF institutions, which would thus not produce an increase in the absolute number of degrees granted by these institutions.

There is no analytical basis for assessing the additional baccalaureates that would be produced due to increased use of distance learning and instructional technology. However, for the purposes of this analysis we assume that 25 percent of those solely taking courses via technology would ultimately receive a degree resulting in 3,900 additional degrees.

Cost

There are at least three cost-related components to be considered in assessing these responses: start-up costs; capital costs; and annual operating costs. Each are discussed below.

Start-Up Cost. Start up costs are presented in Exhibit B-4. Our assumption is that only the establishment of a state college system would entail significant start up costs (i.e., operating costs prior to enrolling the first student, exclusive of capital costs). For the purposes of this analysis, we have assumed that the start up costs for each institution in this system would be equivalent to those recently incurred in the establishment of FGCU. Additionally, we assume that there will be central office start up costs proportionate to those currently realized by the SUS in operating the Board office. Given these assumptions, the cost of starting up a 10 institution state college system would be $336.8 million.

Capital Cost. Capital costs for each response are presented in Exhibit B-5. The basis for these costs are actual capital construction costs per FTE experienced by the SUS. These figures are from the BOR System Office. We have also computed a cost per FTE figure over 25 years, assuming that the cost of new facilities should be amortized over an extended period of time.

For the purposes of this analysis we assume that any SUS expansion would include all components of capital construction cost including undergraduate instruction and office/research space. Thus, assuming the current rate per FTE as well as the estimated additional FTE students, expanding the SUS by 75,000 headcount would result in total capital costs of $921.3 million.

We assume that both the establishment of a state college system and the establishment of selected baccalaureate programs at community colleges would not involve costs for research laboratories since the emphasis will be on undergraduate instruction. Assuming the current rate per FTE as well as the additional FTE students, the total capital cost of establishing the state college system would be $1.1 billion and the total capital cost of adding selected baccalaureate programs at community colleges would be $632.8 million.

We assume that the increased utilization and establishment of joint use facilities via either of the two subresponses (#4a and #4b) will necessitate additional instructional space and office space, but will likely not require additional study or library space given existing facilities. Assuming the current rate per FTE, as well as the additional FTE students, the total capital cost of establishing additional joint use facilities would be $47.0 million.

The increase in FRAG would not result in additional capital costs to the state. However, there may be capital costs to the individual private institutions due to expansion needs.

We did not calculate a capital cost for the increased utilization of technology in meeting enrollment demand given that we do not have a basis for calculating such costs. *However, this should not be interpreted to mean that there would not be capital costs incurred by this response.* To the contrary, there could be **significant** costs depending on the mode of delivery (e.g., video conferencing; satellite broadcast) and the necessary infrastructure (e.g., wiring).

Annual Operating Cost. Annual operating costs for each response are presented in Exhibit B-6. We assume that annual operating cost for the responses involving SUS expansion would be equal to the actual FY 1998 educational and general appropriations per FTE plus average undergraduate in-state tuition and fees. We also assume that these responses would involve minimal additional central office costs for the SUS. Assuming this amount per FTE and the additional FTE students, the total operating cost for expanding enrollment at SUS institutions would be $469.6 million.

Given that there are no existing public institutions in Florida similar to those envisioned through the state college model, we used the median appropriations per FTE and in state tuition for SREB Type VI institutions. These institutions are predominantly undergraduate institutions that award fewer than 30 graduate degrees per year We also assume that the operating cost per FTE for the system office will be equal to that of the SUS. Assuming these amounts per FTE and the additional FTE students, the total operating cost for establishing a state college system would be $422.6 million.

We assume that establishing selected baccalaureate programs at community colleges would have operating costs equivalent to those at a state college, although there would be minimal system office costs involved. Assuming this amount per FTE and the additional FTE students, the total operating cost for this response would be $241.3 million.

We assume that expanding the current joint-use facility model would involve operating costs equivalent to those at SUS main campuses, resulting in total operating costs of $35.1 million. Developing a modified joint use facility model which had a mission and costs similar to institutions envisioned in the state college model would result in somewhat lower total operating costs. Assuming the same amount per FTE as the state college model, the total operating cost for the modified joint use facility model would be $21.1 million.

We assume that the FRAG amount proposed by the Business-Higher Education Partnership ($3,000) would be adopted for the purposes of this analysis and that all 30,000 additional students would eligible to receive this award. We also assume that the 18,000 current FRAG recipients would also receive this amount, increasing the marginal cost for current participants by $1,400 per recipient. Assuming these amounts, the annual operating cost of this response would be $115.2 million, or an average of $3,840 for each of the 30,000 additional students.

We do not have any hard data on the operating cost of providing instruction via distance learning and other instructional technologies. However, for the purposes of this analysis, we assume that institutions would provide such instruction within the current level of available revenue per student. Thus, assuming the same level of cost per student as the SUS expansion responses and the additional FTE, the annual operating cost of increasing the use of technology to provide instruction would be $78.3 million.

Exhibit B-7 summarizes the total annual cost per FTE student of each response including start-up, capital, and operating costs. By way of comparison, the annual cost per additional 10,000 FTE students of the three responses that seem to have the potential for adding the greatest enrollment capacity for the state (i.e., expanding enrollment at SUS institutions, establishing a state college system, and offering selected baccalaureate programs at community colleges) are shown below:

Response	Annual Cost per Additional 10,000 FTE Students
Expand Enrollment at SUS Institutions	~~$108.2 million~~
Establish State College System	~~$66.5 million~~
Authorize Community Colleges to Offer Selected Baccalaureates	~~$76.9 million~~

Accreditation-Related Impact

Exhibit B-8 shows the potential impact related to both institutional and specialized accreditation of each response. As indicated, it is unlikely that the SUS responses would impact the institutional accreditation status of any of the universities. However, by definition, establishing new institutions (i.e., state colleges) or substantially altering the mission of existing community colleges to provide baccalaureate degrees would require approval by the appropriate regional accrediting body (SACS). Increasing the use of joint use facilities or the use of technology may possibly have an impact on institutional accreditation. Increasing the FRAG amount should have no accreditation-related impact.

It is unlikely that any of the SUS responses would have an impact on any of the programs currently accredited at SUS institutions. However, assuming that state colleges would wish to have some accredited programs, there would be an impact due to the establishment of a state college system. It is possible that adding selected baccalaureate programs at community colleges, increasing joint use facilities, and increasing the use of technology to meet projected enrollment demand would require consultation with related specialized accrediting bodies. Increasing the FRAG amount should have no accreditation-related impact.

Time to Implementation

Exhibit B-9 shows the time to implementation of each of the possible responses to enrollment growth. As indicated, the SUS responses, increasing joint use facilities, and increasing the use of technology could all begin immediately, although the full implementation would be incremental. On the other hand, establishing a new state college system from the ground up could take five years or more given the time required to plan, select sites, begin construction, and other start up activities. Establishing selected baccalaureate programs at existing community colleges would take less time, although there would be start up activities involved in this response as well. Increasing the FRAG amount could begin immediately assuming that the Legislature were willing to appropriate the necessary funds.

Flexibility

Exhibit B-10 shows the degree of flexibility in implementing each of the possible responses to enrollment growth. As indicated, all of the SUS options would provide a low to moderate level of flexibility to the state. This is due to the fact that while the number of additional students enrolling in the SUS could be controlled, it would be difficult from a practical standpoint to turn back once a commitment was made to increase the physical capacity of any of these institutions.

By definition, any of the responses that are capital construction intensive and/or require the establishment of new programs severely limit the flexibility of the state to change course or divert resources elsewhere once that commitment has been made. Establishing a new state college system, establishing selected baccalaureate programs at community colleges, and establishing joint use facilities provide a low level of flexibility for the state.

Increasing the FRAG amount provides a moderate level of flexibility for the state given that it can be controlled via annual appropriations. However, there is a practical limit to the amount that appropriations can be reduced without also causing FRAG recipients to "disenroll" from private institutions and look elsewhere. Increasing the use of distance learning and instructional technology to meet enrollment demand potentially provides a moderate to high level of flexibility, assuming that such programs can be delivered independent of time or place constraints.

Geographic Access

Exhibit B-11 shows the geographic access impact of each of the possible responses. Given that increasing enrollment at SUS institutions does not address regional demands per se, these responses would only maintain current levels of geographic access.

On the other hand, the establishment of a state college system, establishing selected baccalaureate programs at community colleges and increasing joint use facilities have the possibility of enhancing geographic access to higher education by responding to demonstrated regional demands. Likewise, increasing the use of distance learning and instructional technology also enhances geographic access given that this mode of delivery can take place anywhere.

Increasing the FRAG amount would only maintain current levels of geographic access to higher education given that it would be working with the same set of institutions.

5.0 Summary and Conclusion

Exhibit B-12 provides a summary of our assessment of each of the possible responses to growth. As indicated, the largest enrollment capacity is gained by establishing a new state college system, increasing the number of students served by the SUS, and/or establishing selected baccalaureate degree programs at community colleges — between 30 and 50 percent of the total projected growth each. However, these are also clearly the most costly responses as well. The remaining responses assessed would also increase the state's enrollment capacity, although they would only provide marginal expansions to current capacity.

As mentioned at the outset of this paper, these responses should not be viewed as mutually exclusive approaches to addressing the issue of future enrollment demand in Florida. Given the assumptions underlying our assessment of each response, it is clear that no single response would be adequate to meet the projected increase of 250,000 students. For example, even if the state were to establish a state college system it would be several years before the institutions would be operational, thus requiring an interim solution to enrollment demand. Further, the wide variety of students that will need to be served also suggests the need for a multi-faceted response.

It is clear from the data, however, that the state could meet this demand through a combination of these responses. At the same time, we feel that these responses should not simply be viewed as independent "add ons" to Florida's current system of higher education. There will likely be substantial interaction among the various responses and the current higher education delivery system if the state were to adopt several or all of these strategies in responding to the projected enrollment growth. For example, establishing a state college system would likely impact **existing** enrollment levels at both SUS institutions and community colleges. Likewise, increasing the FRAG subsidy may have an impact on current public institution enrollments in the state, and/or may entice residents who have previously left the state to attend college to return to Florida. In short, we believe that any policy choices made in addressing the projected statewide increase in enrollment should ultimately be formulated from the standpoint of the impact on the **total** higher education delivery system in Florida, and not in isolation to the system.

Exhibit

Additional Enrollment Capacity Gained By Each Response Through 2010

Response/*Assumption*	**Additional Headcount**	**Additional FTE**
Increase Each SUS Institution Proportionately (75,000 total). *All SUS (except FGCU) grow 32%; FGCU grows to 10,000; FTE conversion of 1.6:1.*	75,000	46,800
Increase Each SUS Institution Equally (75,000 total). *All SUS (except FGCU) grow by 7,500; FGCU grows to 10,000; FTE conversion of 1.6:1.*	75,000	46,800
Maximum Growth of SUS Institutions to 45,000 (75,000 total). *Total SUS growth of 75,000; maximum institutional growth to 45,000; FGCU grows to 10,000; FTE conversion of 1.6:1.*	75,000	46,800
Establish State College System. *Half of projected statewide growth will go to new system; FTE conversion of 1.8:1.*	125,000	69,400
Authorize Community Colleges to Offer Selected BA/BS. *25% of current credit headcount would go on to upper division at CCs.*	80,300	40,100
Increase Current Joint Use Facilities. *Average of 500 upper-level students per site at 14 sites; FTE conversion of 2:1.*	7,000	3,500
Modified Joint Use Facilities. *Average of 500 upper-level students per site at 14 sites; FTE conversion of 2:1.*	7,000	3,500
Increase State Subsidy to Students Attending Private Institutions. *Total additional headcount suggested by ICUF; no FTE conversion given that FRAG is based on full-time recipients.*	30,000	30,000
Increase Use of Distance Learning and Instructional Technologies. *25% of projected statewide growth will be served by DL/IT; 25% of that number will be solely served through DL/IT; FTE conversion of 2:1.*	15,600	7,800

Exhibit 34

Effect Of Three Options Increasing Total SUS Enrollment By 75,000 Headcount Students

(All Options Assume that FGCU will grow to 10,000 Headcount by 2010)

			Proportionate Growth (1a)		Equal Growth (1b)		Max. Growth to 45K (1c)	
Institution	Fall 97 Headcount	Pct. of Total	Total	Growth	Total	Growth	Total	Growth
UF	42,079	19.7%	55,414	13,335	49,590	7,511	45,000	2,921
FSU	30,199	14.2%	39,769	9,570	37,710	7,511	41,811	11,612
FAMU	10,774	5.1%	14,188	3,414	18,285	7,511	14,917	4,143
USF	33,345	15.6%	43,912	10,567	40,856	7,511	45,000	11,655
FAU	19,470	9.1%	25,640	6,170	26,981	7,511	26,957	7,487
UWF	8,260	3.9%	10,878	2,618	15,771	7,511	11,436	3,176
UCF	28,460	13.3%	37,479	9,019	35,971	7,511	39,404	10,944
FIU	29,574	13.9%	38,946	9,372	37,085	7,511	40,946	11,372
UNF	11,150	5.2%	14,683	3,533	18,661	7,511	15,438	4,288
Subtotal	**213,311**	**100.0%**	**280,909**	**67,598**	**280,909**	**67,598**	**280,909**	**67,598**
FGCU	2,598	NA	10,000	7,402	10,000	7,402	10,000	7,402
TOTAL	**215,909**	**NA**	**290,909**	**75,000**	**290,909**	**75,000**	**290,909**	**75,000**

Exhibit

Additional Baccalaureate Degrees Granted Through Responses

Response/Assumption	Current Grad. Rate	Additional Headcount	Additional Degrees
Increase Each SUS Institution Proportionately ***Current six-year graduation rate for SUS FTICs will continue.***	56%	75,000	42,000
Increase Each SUS Institution Equally *Current six-year graduation rate for SUS FTICs will continue.*	56%	75,000	42,000
Maximum Growth of SUS Institutions to 45,000 ***Current six-year graduation rate for SUS FTICs will continue.***	56%	75,000	42,000
Establish State College System *Assumes median six-year graduation rate for all SUS institutions except UF and FSU.*	44%	125,000	55,000
Authorize Community Colleges to Offer Selected BA/BS ***Students will have same grad. rate as AA transfers to SUS.***	68%	80,300	54,500
Increase Current Joint Use Facilities *Students will have same grad. rate as AA transfers to SUS.*	68%	7,000	4,700
Modified Joint Use Facilities ***Average of 500 upper-level students per site at 14 sites; FTE conversion of 2:1.***	68%	7,000	4,700
Increase State Subsidy to Students Attending Private Institutions# *Current graduation rate for Florida private institutions will continue.*	51%	10,000	5,100
Increase Use of Distance Learning and Instructional Technology	25%	15,600	3,900

# While private institutions would be taking 30,000 additional Florida residents, only 10,000 of these would be "new" students over and above current enrollment levels. The remaining 20,000 would be in lieu of non-residents currently enrolled in ICUF institutions, which would not produce an increase in the absolute number of degrees granted.

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Exhibit

Estimated Start-up Costs Of Possible Responses To Enrollment Growth

Response/Assumption	Full Cost	Total Start-Up Costs	Other Related Costs
Increase Each SUS Institution Proportionately *Minimal start-up costs*	$ -	$ -	$ -
Increase Each SUS Institution Equally *Minimal start-up costs*	$ -	$ -	$ -
Maximum Growth of SUS Institutions to 45,000 *Minimal start-up costs*	$ -	$ -	$ -
Establish State College System (10 institutions + Central Office) *Start up costs per institution equivalent to those incurred in establishing FGCU through FY 1997 ($22.9 M), plus $10 M per institution in site development costs; central office costs equal to BOR as percentage of total SUS General Revenue support (3.4%).*	$ 329,000,000	$ 7,763,100	$ 336,763,100
Authorize Community Colleges to Offer Selected BA/BS *Minimal start-up costs*	$ -	$ -	$ -
Increase Current Joint Use Facilities *Minimal start-up costs*	$ -	$ -	$ -
Modified Joint Use Facilities *Minimal start-up costs*	$ -	$ -	$ -
Increase State Subsidy to Students Attending Private Institutions *Minimal start-up costs*	$ -	$ -	$ -
Increase Use of Distance Learning and Instructional Technology *Minimal start-up costs*	$ -	$ -	$ -

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Exhibit

Estimated Capital Costs Of Possible Responses To Enrollment Growth

Response/Assumption	Additional FTE	Capital Cost Per FTE Total	 Over 25 Years	Total Capital Costs
Increase Each SUS Institution Proportionately ***Current SUS construction cost per FTE (Undergraduate Instruction + office/research space)***	46,800	$ 19,685	$ 787	$ 921,270,168
Increase Each SUS Institution Equally *Current SUS construction cost per FTE (Undergraduate instruction + office/research space)*	46,800	$ 19,685	$ 787	$ 921,270,100
Maximum Growth of SUS Institutions to 45,000	46,800	$ 19,685	$ 787	$ 921,270,100
Establish State College System *Same as SUS construction cost less cost for research labs.*	69,400	$ 15,782	$ 631	$ 1,095,256,900
Authorize Community Colleges to Offer Selected BA/BS ***Same as SUS construction cost less cost for research labs.***	40,100	$ 15,782	$ 631	$ 632,850,100
Increase Current Joint Use Facilities *Only undergraduate instruction construction costs (less study/library cost) plus office space.*	3,500	$ 13,441	$ 538	$ 47,043,100
Modified Joint Use Facilities ***Only undergraduate instruction construction costs (less study/library cost) plus office space.***	3,500	$ 13,441	$ 538	$ 47,043,100
Increase State Subsidy to Students Attending Private Institutions. *No capital cost to state.*	30,000	$ -	$ -	$ -
Increase Use of Distance Learning and Instructional Technology	7,800	Unknown, but significant		

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Exhibit

Estimated Annual Operating Costs Of Possible Responses To Enrollment Growth

Response/Assumption	Additional FTE	Operating Cost per FTE Full Cost	System Office	Other Cost	Total Operating Costs	Total Operating Cost
Increase Each SUS Institution Proportionately *FY 1998 GRF Appropriations per FTE + average in-state tuition and fees; minimal additional central office costs.*	46,800	$ 10,035	$ -	$ -	$ 10,035	$ 469,638,000
Increase Each SUS Institution Equally *FY 1998 GRF Appropriations per FTE + average in-state tuition and fees; minimal additional central office costs.*	46,800	$ 10,035	$ -	$ -	$ 10,035	$ 469,638,000
Maximum Growth of SUS Institutions to 45,000 *FY 1998 GRF Appropriations per FTE + average in-state tuition and fees; minimal additional central office costs.*	46,800	$ 10,035	$ -	$ -	$ 10,035	$ 469,638,000
Establish State College System *SREB VI institution average appropriation per FTE + average in-state tuition; same central office cost per FTE student as SUS.*	69,400	$ 6,018	$ 71	$ -	$ 6,089	$ 422,576,600
Authorize Community Colleges to Offer Selected BA/BS *Assumes same cost as state college system; minimal additional central office costs.*	40,100	$ 6,018	$ -	$ -	$ 6,018	$ 241,321,800
Increase Joint Use Facilities *Assumes same cost as SUS main campuses; minimal additional central office costs.*	3,500	$ 10,035	$ -	$ -	$ 10,035	$ 35,122,500
Modified Joint Use Facilities *Assumes same cost as state college system; minimal additional central office costs.*	3,500	$ 6,018	$ -	$ -	$ 6,018	$ 21,063,000
Increase State Subsidy to Students Attending Private Institutions# *FRAG amount proposed by Business Higher Education Partnership*	30,000	$ -	$ -	$ 3,840	$ 3,840	$ 115,200,000
Increase Use of Distance Learning and Instructional Technology *Assumes same cost as SUS responses*	7,800	$ 10,035	$ -	$ -	$ 10,035	$ 78,273,000

# Calculation of total operating cost for Option 5: 30,000 new recipients @ $3,000/recipient ($90 million) **plus** 18,000 current recipients @ $1,400 marginal cost per recipient of increasing the award from $1,600 to $3,000 ($25.2 million). Average cost per **additional** student is thus $3,840.

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Exhibit

Estimated Total Average Annual Cost Per Additional Fte Student Of Possible Responses To Enrollment Growth

Response	Additional FTE	Average Annual Cost per Additional FTE Student Start-Up ^	 Capital #	 Operating	 Total	Total Annual Costs
Increase Each SUS Institution Proportionately	**46,800**	**$ -**	**$787**	**$10,035**	**$10,822**	**$506,488,807**
Increase Each SUS Institution Equally	46,800	$ -	$787	$10,035	$10,822	$506,488,807
Maximum Growth of SUS Institutions to 45,000	**46,800**	**$ -**	**$787**	**$10,035**	**$10,822**	**$506,488,807**
Establish State College System ^	69,400	$ 970	$631	$6,089	$7,691	$533,739,497
Authorize Community Colleges to Offer Selected BA/BS	**40,100**	**$ -**	**$631**	**$6,018**	**$6,649**	**$266,635,807**
Increase Current Joint Use Facilities	3,500	$ -	$538	$10,035	$10,573	$37,004,226
Modified Joint Use Facilities	**3,500**	**$ -**	**$538**	**$6,018**	**$6,556**	**$22,944,726**
Increase State Subsidy to Students Attending Private Institutions +	30,000	$ -	$ -	$ 3,840	$ 3,840	$115,200,000
Increase Use of Distance Learning and Instructional Technology @	**7,800**	**$ -**	*Unknown*	$10,035	$10,035	$78,273,000

# Total capital costs per FTE spread over 25 years.
^ Total start up costs per FTE spread over five years.
+ Annual cost is based on the total additional cost per year of adding 30,000 new recipients plus the marginal cost of increasing FRAG for current recipients.
@ Total annual cost per FTE for distance learning shown here is understated due to the fact that it does not include capital costs.

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Exhibit

Potential Accreditation-related Impact Of Possible Responses To Growth

Response	Accreditation Impact Institutional	Specialized
Increase Each SUS Institution Proportionately	**Unlikely**	**Unlikely**
Increase Each SUS Institution Equally	Unlikely	Unlikely
Maximum Growth of SUS Institutions to 45,000	**Unlikely**	**Unlikely**
Establish State College System	Yes	Yes
Authorize Community Colleges to Offer Selected BA/BS	**Yes**	**Possibly**
Increase Current Joint Use Facilities	Possibly	Possibly
Modified Joint Use Facilities	**Possibly**	**Possibly**
Increase State Subsidy to Students Attending Private Institutions	No	No
Increase Use of Distance Learning and Instructional Technology	**Possibly**	**Possibly**

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Exhibit 29

Time to Implementation of Possible Response to Enrollment Growth

Time to Implementation	Response
Increase Each SUS Institution Proportionately	**Incremental**
Increase Each SUS Institution Equally	Incremental
Maximum Growth of SUS Institutions to 45,000	**Incremental**
Establish State College System	5 Years or More
Authorize Community Colleges to Offer Selected BA/BS	**3-5 Years**
Increase Current Joint Use Facilities	Incremental
Modified Joint Use Facilities	**Incremental**
Increase State Subsidy to Students Attending Private Institutions	Immediate
Increase Use of Distance Learning and Instructional Technology	**Incremental**

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Exhibit

Degree Of Flexibility Of Possible Responses To Enrollment Growth

Response	Degree of Flexibility
Increase Each SUS Institution Proportionately	Low - Moderate
Increase Each SUS Institution Equally	Low - Moderate
Maximum Growth of SUS Institutions to 45,000	Low - Moderate
Establish State College System	Low
Authorize Community Colleges to Offer Selected BA/BS	Low
Increase Current Joint Use Facilities	Low
Modified Joint Use Facilities	Low
Increase State Subsidy to Students Attending Private Institutions	Moderate
Increase Use of Distance Learning and Instructional Technology	Moderate - High

Exhibit

Geographic Access Impact Of Possible Responses To Enrollment Growth

Response	Impact on Geographic Access
Increase Each SUS Institution Proportionately	Maintains Current Levels
Increase Each SUS Institution Equally	Maintains Current Levels
Maximum Growth of SUS Institutions to 45,000	Maintains Current Levels
Establish State College System	Enhances
Authorize Community Colleges to Offer Selected BA/BS	Enhances
Increase Current Joint Use Facilities	Enhances
Modified Joint Use Facilities	Enhances
Increase State Subsidy to Students Attending Private Institutions	Maintains Current Levels
Increase Use of Distance Learning and Instructional Technology	Enhances

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Exhibit

Summary Of Assessment Of Possible Responses To Enrollment Growth By Criterion

Response	Capacity (% of Growth)	Additional Degrees	Additional Cost: Start-Up	Additional Cost: Capital	Additional Cost: Operating	Accred. Impact	Time to Implementation	Flexibility	Geographic Access
Increase Each SUS Institution Proportionately	30%	42,000	Minimal	$921 M	$470 M	Unlikely	Incremental	Low-Moderate	Maintains
Increase Each SUS Institution Equally	30%	42,000	Minimal	$921 M	$470 M	Unlikely	Incremental	Low-Moderate	Maintains
Maximum Growth of SUS Institutions to 45,000	30%	42,000	Minimal	$921 M	$470 M	Unlikely	Incremental	Low-Moderate	Maintains
Establish State College System	50%	55,000	$337 M	$1.10 B	$423 M	Yes	5+ Years	Low	Enhances
Authorize Community Colleges to Offer Selected BA/BS	32%	54,500	Minimal	$633 M	$241 M	Yes	3-5 Years	Low	Enhances
Increase Current Joint Use Facilities	3%	4,700	Minimal	$47 M	$21 M	Possibly	Incremental	Low	Enhances
Modified Joint Use Facilities	3%	4,700	Minimal	$47 M	$35 M	Possibly	Incremental	Low	Enhances
Increase State Subsidy to Students Attending Private Institutions	12%	5,100	Minimal	None	$115 M	No	Immediate	Moderate	Maintains
Increase Use of Distance Learning and Instructional Technology	6%	3,900	Minimal	None	$78 M	Possibly	Incremental	Moderate-High	Enhances

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Interdependence

Exhibit 91

Ten U.S. School Districts with the Largest Enrollment Increase 1984-1994

School District	1984	1994	Enrollment Increase	Percent Change
New York City	923,100	1,022,534	99,434	11
Dade County, FL	231,277	321,615	90,338	39
Los Angeles	546,990	632,973	85,983	16
Broward County, FL	127,474	199,255	71,781	56
Clark County, NV	89,627	156,348	66,721	74
Palm Beach Co., FL	78,374	127,519	49,145	63
Orange County, FL	78,624	118,666	40,042	51
Gwinnett Co., GA	41,096	80,220	39,124	95
Montgomery Co., MD	88,811	117,082	28,271	32
Mesa, AZ	41,746	69,160	27,414	66

Source: U.S. Department of Education

Exhibit 92

Florida Public School District Size, Fall 1996

District Size	# of Districts	Enrollment	% of Enrollment
Over 200,000	2	559,696	25.0
100,000-199,999	5	647,480	28.9
50,000-99,999	5	307,757	13.7
20,000-49,999	15	463,002	20.7
10,000-19,999	9	125,782	5.6
5,000-9,999	11	77,854	3.5
1,000-4,999	20	58,712	2.6

Total Enrollment: **2,240,283**

Source: Florida Department of Education

Exhibit

Pre-K Public School Membership, Fall 1996

Ten Largest School Districts

Districts	Membership
Dade	341,120
Broward	218,576
Hillsborough	147,788
Palm Beach	137,600
Orange	128,941
Duval	126,100
Pinellas	107,051
Polk	74,800
Brevard	66,679
Volusia	58,004
Total	**1,406,659**

Ten Smallest School Districts

Districts	Membership
Gulf	2,346
Hamilton	2,336
Dixie	2,323
Union	2,317
Calhoun	2,288
Jefferson	2,127
Franklin	1,575
Liberty	1,247
Glades	1,149
Lafayette	1,109
State Total (Districts 1-67)	**2,240,283**

Source: Education Information and Accountability Services, Florida Department of Education

Exhibit

Pre-K Public School Membership Number and Percent by Racial/ Ethnic Category Fall 1996

Ten Largest School Districts

Districts	White		Black		Hispanic		As/Pac/IS		Amer Ind. AK Native		Total Minority		Total Membership
	#	%	#	%	#	%	#	%	#	%	#	%	
Dade	46,138	14	114,756	34	175,505	51	4,453	1.3	268	0.1	294,982	86	341,120
Broward	103,554	47	77,222	35	31,540	14	5,683	2.6	577	0.3	115,022	53	218,576
Hillsborough	82,712	56	35,663	24	26,067	18	2,877	2	469	0.3	65,076	44	147,788
Palm Beach	74,061	54	40,677	30	19,640	14	2,695	2	527	0.4	63,539	46	137,600
Orange	65,406	51	36,661	28	22,137	17	4,338	3.4	399	0.3	63,535	49	128,941
Duval	67,776	54	51,268	41	3,531	3	3,339	2.7	186	0.2	58,324	46	126,100
Pinellas	80,357	75	20,294	19	3,365	3	2,863	2.7	172	0.2	26,694	24	107,051
Polk	50,222	67	17,522	23	6,277	8	653	0.9	126	0.2	24,578	33	74,800
Brevard	53,171	80	9,734	15	2,435	4	1,182	1.8	157	0.2	13,508	20	66,679
Volusia	43,825	76	9,466	16	4,021	7	561	1	131	0.2	14,179	24	58,004

Ten Smallest School Districts

Districts	White		Black		Hispanic		As/Pac/IS		Amer Ind. AK Native		Total Minority		Total Membership
	#	%	#	%	#	%	#	%	#	%	#	%	
Gulf	1,867	80	451	19	15	0.6	8	0.3	5	0.2	479	20	2,346
Hamilton	1,059	45	1,187	51	85	3.6	3	0.1	2	1	1,277	55	2,336
Dixie	2,077	89	232	10	13	0.6	1	0.04		0	246	11	2,323
Union	1,863	80	421	18	24	1	8	0.4	1	0	454	20	2,317
Calhoun	1,897	83	342	15	35	1.5	12	0.5	2	0.1	391	17	2,288
Jefferson	647	30	1,469	69	4	0.2	6	0.3	1	0.1	1,480	70	2,127
Franklin	1,272	81	280	18	13	0.8	8	0.5	2	0.1	303	19	1,575
Liberty	1,048	84	165	13	32	2.6	2	0.2		0	199	16	1,247
Glades	548	51	307	27	240	20.9	3	0.3	12	0.1	562	50	1,149
Lafayette	930	84	132	12	47	4.2		0		0	179	16	1,109
State Total (District 1-67)	1,270,933	57	567,976	25	356,237	16	39,956	2	5,181	0.2	969,350	43	2,240,283

Source: Educational Information and Accountability Services, Florida of Education

Exhibit

Florida Public Schools Duplicated Membership in Exceptional Student Programs Fall 1992 through Fall 1996

Program Name	1992	1993	1994	1995	1996	% Change 1992 to 1996
Educable Mentally Handicapped	19.254	21.033	22.854	24.670	26.335	36.8%
Trainable Mentally Handicapped	7.073	7.338	7.523	7.719	7.800	10.3%
Physically Handicapped	4.686	5.068	5.498	5.794	6.344	35.4%
Physical & Occupational Therapy	401	520	511	602	639	59.4%
Speech/Language & Hearing	76.000	78.912	81.731	85.232	89.290	17.5%
Visually Handicapped	884	913	945	909	1.115	26.10%
Emotionally Handicapped	21.745	23.050	23.967	24.666	25.358	16.6%
Specific Learning Disability	102.324	109.478	115.779	122.493	129.805	26.9%
Gifted	67.807	70.863	78.543	83.331	85.681	26.4%
Hospital/Homebound	2.003	2.135	2.107	2.107	2.215	10.6%
Profoundly Handicapped	9.030	9.698	10.415	10.415	12.080	33.8%
Total	**311,203**	**329,008**	**349,873**	**368,710**	**386,662**	**24.4%**

Source: Education Information and Accountability Services, Florida Department of Education

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Exhibit

Exceptional Education Membership by Program December 1996 (Unduplicated)

Ten Largest School Districts

Districts	Total
Dade	50,149
Broward	30,844
Hillsborough	27,303
Palm Beach	25,945
Orange	24,088
Duval	24,202
Pinellas	25,349
Polk	12,924
Brevard	14,882
Volusia	10,451
TOTAL	**246,137**

Ten Smallest School Districts

Districts	Membership
Gulf	357
Hamilton	382
Dixie	602
Union	402
Calhoun	415
Jefferson	471
Franklin	276
Liberty	220
Glades	167
Lafayette	133
STATE TOTAL (Districts 1-67)	**414,555**

Source: Bureau of Instructional Support and Community Services, Florida Department of Education.

Exhibit 67

Pre-K-12 Limited English Proficient Students 1995-96

Ten Largest School Districts

Districts	LEP Students
Dade	66,357
Broward	17,997
Hillsborough	14,820
Palm Beach	16,859
Orange	8,851
Duval	1,496
Pinellas	1,908
Polk	1,798
Brevard	778
Volusia	1,342
TOTAL	**131,936**

Ten Smallest School Districts

Districts	LEP Students
Gulf	0
Hamilton	40
Dixie	2
Union	1
Calhoun	6
Jefferson	6
Franklin	4
Liberty	0
Glades	73
Lafayette	22
State Total (Districts 1-67)	**157,030**

*Currently being served in an ESOL program.

Source: Office of Multicultural Student Language Education, Florida Department of Education.

Exhibit

Average Teacher Salaries—All Degree Levels 1996-97

Ten Largest School Districts

District	Number of Teachers	Average Salary
Dade	18,718	$39,439
Broward	11,247	$37,496
Hillsborough	9,460	$32,567
Palm Beach	8,201	$38,679
Orange	8,043	$31,757
Duval	6,882	$33,032
Pinellas	7,052	$34,013
Polk	4,399	$29,288
Brevard	4,084	$31,979
Volusia	3,669	$31,776

Ten Smallest School Districts

District	Number of Teachers	Average Salary
Gulf	151	$30,070
Hamilton	163	$28,333
Dixie	153	$28,225
Union	135	$27,016
Calhoun	154	$31,364
Jefferson	137	$29,596
Franklin	113	$29,949
Liberty	76	$31,228
Glades	69	$28,230
Lafayette	72	$26,737
State Total (Districts 1-67)	**132,231**	**$33,885**

Source: Education Information and Accountability Services, Florida Department of Education.

Exhibit

Florida Department of Education, Graduates Receiving Standard Diplomas by Race 1995-96 School Year

Ten Largest School Districts

District	White	Black	Hispanic	Asian/Pac Islanders	Amer Indian/ Alask. Native	Total
Dade	2,223	4,276	7,019	259	6	13,783
Broward	4,313	2,477	1,104	289	18	8,201
Hillsborough	3,614	1,024	873	193	16	5,720
Palm Beach	3,310	1,340	626	160	11	5,447
Orange	3,166	1,277	1,030	310	24	5,807
Duval	2,431	1,437	103	207	5	4,183
Pinellas	3,451	620	99	136	5	4,311
Polk	1,962	482	139	50	8	2,641
Brevard	2,285	350	134	77	5	2,851
Volusia	1,930	305	172	51	8	2,466

Ten Smallest School Districts

District	White	Black	Hispanic	Asian/Pac Islanders	Amer Indian/ Alask. Native	Total
Gulf	95	35		1	1	132
Hamilton	70	39	2			111
Dixie	55	8				63
Union	78	19		2		99
Calhoun	72	10	2	1		85
Jefferson	21	69				90
Franklin	55	15				70
Liberty	49	8	2		1	60
Glades	17	12	4			33
Lafayette	55	8				63
State Totals (Districts 1-67)	**54,622**	**18,792**	**13,178**	**2,468**	**182**	**89,242**

Source: Florida Department of Education.

Exhibit

Postsecondary Plans of High School Seniors, 1995-96

Ten Largest School Districts

District	Total Diplomas	Florida Community College			Florida University			Non-FL College/Univ.	Technical/Trade/ Other			Total Cont. Educ.	% Cont. Educ.
	Grads	Public	Private	Total	Public	Private	Total		Fl	Non-Fl	Total		
Dade	14,057	4,582	48	4,630	2,844	672	3,516	1,023	695	77	772	9,941	70
Broward	8,375	2,474	62	2,536	2,218	383	2,601	701	456	88	544	6,382	76
Hillsborough	5,816	1,266	45	1,311	1,586	189	1,775	518	354	20	374	3,978	68
Palm Beach	5,545	818	10	828	657	99	756	238	144	28	172	1,994	36
Orange	5,943	1,780	1	1,781	716	125	841	487	175	3	178	3,287	55
Duval	4,409	1,210	0	1,210	1,006	201	1,207	403	66		66	2,886	65
Pinellas	4,422	1,567	2	1,569	919	131	1,050	410	217	6	223	3,252	74
Polk	2,760	999	13	1,012	367	160	527	190	189	40	229	1,958	71
Brevard	2,916	750	21	771	283	80	363	170	41	37	78	1,382	47
Volusia	2,514	1,004	8	1,012	372	119	491	242	34	18	52	1,797	71

Ten Smallest School Districts

District	Total Diplomas	Florida Community College			Florida University			Non-FL College/Univ.	Technical/Trade/ Other			Total Cont. Educ.	% Cont. Educ.
	Grads	Public	Private	Total	Public	Private	Total		Fl	Non-Fl	Total		
Gulf	136	62		62	5	1	6	9	14	1	15	92	68
Hamilton	116	47		47	22	1	23	12	5	4	9	91	78
Dixie	67	37		37	3		3		2	1	3	43	64
Union	103	54		54	6	5	11	6		4	4	75	73
Calhoun	87	39		39	2	1	3	3	1	1	2	47	54
Jefferson	95	15		16	30		30	8	23	8	31	85	89
Franklin	74	24	1	24	3		3	3	6	1	7	37	50
Liberty	60	36		41	3		3	4	5	3	8	56	93
Glades	35	9	5	9	4	1	5	8	4		4	26	74
Lafayette	65	33		33	8	1	9	6	4		4	52	80
State Totals (Districts 1-67)	**91,563**	**27,891**	**523**	**28,414**	**16,379**	**3,029**	**19,408**	**7,308**	**4,382**	**655**	**4,382**	**59,512**	**65**

Source: Postsecondary Plans Report, 1995-96, Florida Department of Education.

Appendix D

Outcomes

Exhibit

Evidence Supporting The Relationship Among Educational Attainment, Productivity, And Earnings

Productivity *Education contributes to productivity and the state's economic condition.*

- Worker productivity in the United States has grown nearly continuously since the end of World War II. Postwar growth in U.S. productivity was slower after 1973 than it was before 1973. (NCES 97-269)
- Growth in education appears to be a substantial contributor to productivity growth, accounting for an estimated 11 to 20 percent of growth in U.S. productivity in recent decades. (NCES 97-269)
- Enormous gains in educational attainment of young adults occurred in America between 1940 and about 1976. *Between 1976 and 1995, the proportion of 25 to 29 year olds with four years or more college has virtually stayed the same.* (Mortenson, February 1997)

Earnings and Return on Education *Increasingly, jobs that pay substantially more will require postsecondary education. In turn, the likelihood of completing postsecondary degrees increases with the level of family income.*

- The differences in earnings between college graduates, high school graduates, and high school dropouts have increased over time, suggesting that the economic returns to education have also increased. (NCES 97-269)
- Across the nation, during the last 25 years, people with the least formal education have seen their incomes and living standards decline; those with four years of college have maintained their incomes and living standards. Only those people with education beyond the bachelor's degree have seen incomes rise faster than living costs, thus providing real gains in living standards. (Mortenson, February 1997)
- 1995 data reveal that, by age 24, a person whose family income is greater than $75,000 is three times more likely to reach college (85.7%) than is another person whose family income is less than $10,000 (28.0%) and nearly twice as likely as a person whose family income is $20,000-$25,000 (46.8%). (Mortenson, October 1997)
- Workers with higher literacy earn more and experience less unemployment than workers with lower literacy. Differences in unemployment and earnings by literacy level exist even within broad categories of educational attainment. (NCES 97-269)
- The returns on education have increased over time, partly in response to the use of new production technologies, which increase the demand for highly educated workers and decrease the demand for production workers. (NCES 97-269)
- The three most commonly cited reasons for attending college by American college freshmen in 1995 included (by percent citing very important): to get a better job (77%), to learn more about things (74%), and to make more money (72%). (Mortenson, May 22, 1997)

Exhibit

continued

Economic and Educational Status of Florida's Residents *Compared to the nation, the working-age population of Florida is poorer and less educated.*

- In 1993-94, Florida had a 12% high school dropout rate (compared to 9% nationally) and ranked 43rd in the nation. (Kids Count, 1997)
- The literacy levels of Florida's adults are comparable to national averages.
- In 1994, the median income of Florida's families with children was $32,500, compared to $37,000 nationally. (Kids Count, 1997)
- In 1994, 25% of Florida's children were living in poverty, compared to 21% nationally. (Kids Count, 1997)
- In 1994, 13% of Florida's children were living in extreme poverty, compared to 9% nationally. (Kids Count, 1997)
- In 1994, 16% of Florida's children were living with parents who were high school dropouts, compared to 15% nationally. (Kids Count, 1997)
- In 1990, 15% of Florida's children were living in a neighborhood where more than one-quarter of 16- to 19-year-olds were high school dropouts, compared to 10% nationally. (Kids Count, 1997)
- In 1992-93, Florida ranked 5th in the number of associate degrees awarded per 100,000 working age population (FL granted 745 compared to 466 nationally per 100,000 18-44 year old population). (NCES; U.S. Census Bureau)
- In 1993-94, Florida ranked 46th in the number of baccalaureate degrees awarded per 100,000 working age population (FL granted 854 compared to 1,069 nationally per 100,000 18-44 year old population). (NCES; U.S. Census Bureau)
- In 1993-94, Florida ranks 44th on a per capita basis for the number of science and engineering doctoral degrees awarded (7.9 per 100,000 18-44 year old population). (SUS; U.S. Census Bureau)

Earnings and Return on Education *Floridians with baccalaureate or higher degrees earn higher salaries, see larger increases in their salaries over time, and are much less likely to receive public assistance than non-postsecondary degree holders.*

- By the 4th quarter 1994, earnings for Florida graduates from 1990-91 reveal that a worker with a bachelor's degree earns nearly twice that of a high school graduate ($3,884). The worker with a baccalaureate earned $7,707 in the 4th quarter compared with $6,542 for the worker with an associate's degree. (FETPIP)
- By the 4th quarter 1994, less than 1% of Florida graduates of baccalaureate and higher programs and 1.8% of associate degree graduates received public assistance (compared to 10.4% of postsecondary certificate completers, and 9.4% of high school graduates). (FETPIP)
- By the 4th quarter 1994, earnings of Florida baccalaureate and associate degree graduates of 1990-91 increased 34% and 24%, respectively. (FETPIP)

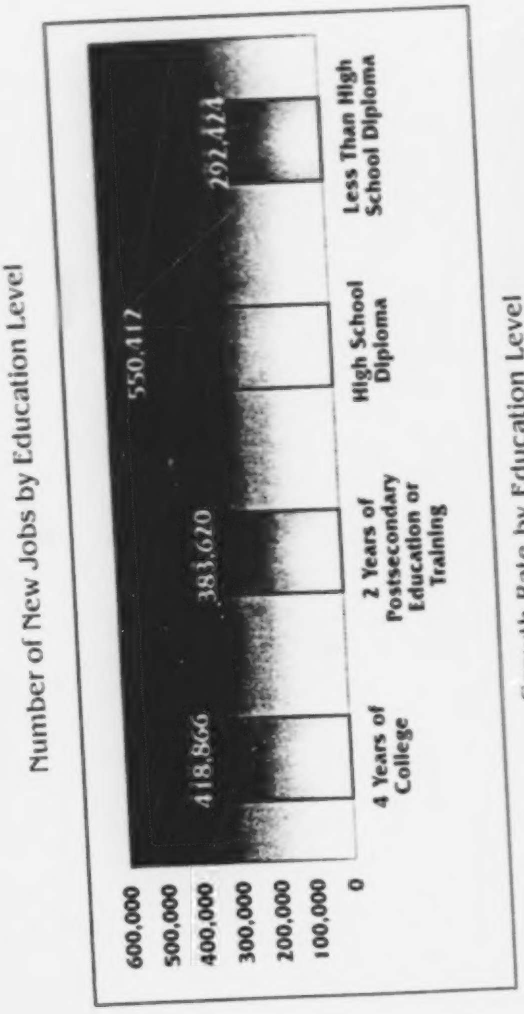
Reasons for Attending College *Nearly half of all new jobs created between 1990 and 2000 will require a postsecondary degree.*

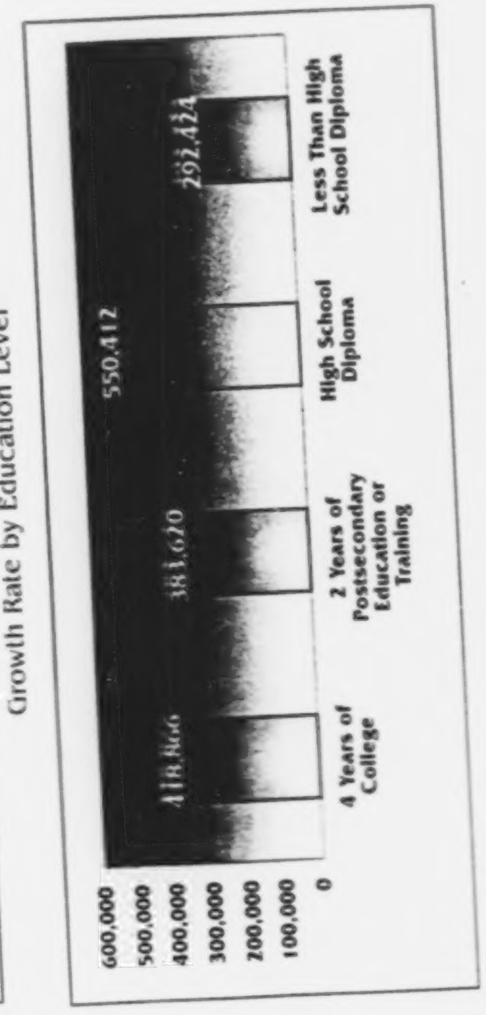
- Between 1994 and 2005, the number of new jobs requiring four years of college will increase by 418,866 in Florida, representing 25.5% of all new jobs and a growth rate of 30.4%. (BLMI)
- Between 1994 and 2005, the number of new jobs requiring two years of postsecondary education or training will increase by 383,620 in Florida, representing 23.3% of all new jobs and a growth rate of 23.7%. (Bureau of Labor Market Information)

Exhibit

Projected Number Of Jobs, New Jobs, And Growth Rate By Educational Preparation Level in Florida, 1994-2005

Education & Training Required	# of Jobs in 1994	% of Total	# of Jobs in 2005	% of Total	Number of New Jobs	% of Total	Growth Rate
4 Years of College	1,379,079	21.1%	1,797,945	22.0%	418,866	25.5%	30.4%
2 Years of Postsecondary Education or Training	1,621,217	24.8%	2,004,837	24.5%	383,620	23.3%	23.7%
High School Diploma	2,425,873	37.1%	2,976,285	36.4%	550,412	33.5%	22.7%
Less Than High School Diploma	1,107,514	17.9%	1,399,938	17.1%	292,424	17.8%	26.4%
	6,533,683	100.0%	8,179,005	100.0%	1,645,322	100.0%	25.2%

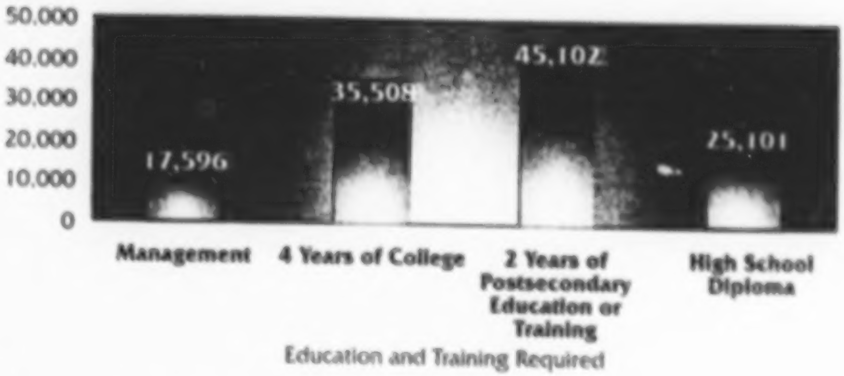

Number of New Jobs by Education Level


Growth Rate by Education Level

Source: Florida Education and Training Placement Information Program

Exhibit D-3

Annual Openings for High-Demand Occupations in Florida Paying More Than $9 Per Hour by Education and Training Level, 1996-2005



Source: FETPIP, 1996 Occupational Forecasting Conference.
Note: Annual openings is the average amount per year for the next ten years.

Exhibit D-4

Annual Degrees Granted Per 100,000 18-44-Year-Old Population

Degree	United States	Florida
Associate's	498	766
Bachelor's	1,071	844
Master's	367	278
Doctoral	41	31
Professional	70	47

Source: U.S. Census Bureau, *Statistical Abstract*, 1995.
NCES, *Digest of Education Statistics*, 1997.

Exhibit
15

Baccalaureate Degrees Granted Per 100,000 18-44-Year-Old Population In Top Ten Economically Strong States, 1994-95

State	Degrees Granted*	18-44-Year-Old Population (In Thousands)	Degrees Per 100,000 18-44-Year-Old Population
Top 10	309,418	27,797	1,113
Massachusetts	40,297	2,596	1,552
New Hampshire	7,395	493	1,500
Delaware	4,466	302	1,479
New York	93,549	7,564	1,237
Virginia	31,106	2,903	1,072
Illinois	52,270	4,892	1,068
Connecticut	13,972	1,350	1,035
Washington	21,828	2,266	963
Maryland	19,908	2,178	914
New Jersey	24,627	3,253	757
Florida	**44,924**	**5,320**	**844**
Florida % of Top Ten Average			76%
Numbers if Florida were at Top Ten Average	50,212	5,320	1,113

*Degrees granted include both public and private institutions.

State economic health calculated from a composite index of seven economic indicators:

- Percent of Population below poverty level
- Median Household Income
- Average Annual Pay per capita
- Gross State Product per capita
- Change in Gross State Product per capita from 1980-1992
- Disposable Income per capita
- Change in Disposable Income per capita from 1980-1995

Source: U.S. Census Bureau, *Statistical Abstract*, 1995
NCES, *Digest of Education Statistics*, 1997

Note: Alaska, Nevada, and Hawaii are in the Top Ten, however, because of the unique nature of their economies, they were omitted.

Exhibit

Engineering And Science Doctoral Degrees Granted By Select States Per 100,000 18-44-Year-Old Population Public And Private Institutions, 1994-95

State	Per Capita	Rank
MA	38.5	1
CO	26.1	4
NY	21.8	8
IL	19.7	14
PA	19.4	16
NC	17.6	21
VA	17.5	22
CA	17.2	23
GA	13.0	34
FL	**7.9**	**44**
U.S. Average	**17.2**	

Source: NCES; U.S. Census Bureau.

Exhibit

Education Doctoral Degrees Granted By Select States Per 100,000 18-44-Year-Old Population Public And Private Institutions, 1994-95

State	Per Capita	Rank
Ma	11.07	7
FL	**9.38**	**12**
IL	8.40	14
PA	8.12	15
VA	7.18	19
CO	6.59	26
GA	5.80	30
NY	5.29	35
NC	3.90	40
CA	3.89	41
U.S. Average	**6.44**	

Source: NCES; U.S. Census Bureau.

Appendix F

Funding

Exhibit

Legislative Appropriations—General Revenue

	Amount	% of Total	Amount	% of Total	Ten-Year Increase
Education	$5,515,094,130	64%	$8,127,929,323	52%	47%
Healthcare	$1,933,255,643	22%	$4,456,820,925*	29%	131%
Corrections	$501,668,026	6%	$1,413,088,767	9%	182%
Total (All Agencies)	$8,629,867,335		$15,573,873,306		80%

*Agencies includes: Agency for Health Care Administration
Elder Affairs
Health and Rehabilitative Services
Juvenile Justice

Source: Florida's Final Budget Report and Ten-Year Summary of Appropriations Data, 1987-88 through 1996-97, Volume 19 Office of Planning and Budgeting, Governor's Office.

Note: Appropriations displayed do not include lottery monies.

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Exhibit 120

State Appropriations - Ten-Year Summary

	1987-88	% Total	1996-97	% Total	Ten-Year Increase
Total All Funds	$18,521,881,777		$39,816,970,958		+115%
Education - Total	$6,765,041,430	37%	$11,924,266,037	30%	+76%
Universities	$1,076,884,792	6%	$1,806,123,888	5%	+68%
Community Colleges	$441,693,061	2%	$724,073,314	2%	+64%
SUS and CC	$1,518,577,853	8%	$2,530,196,702	7%	+67%

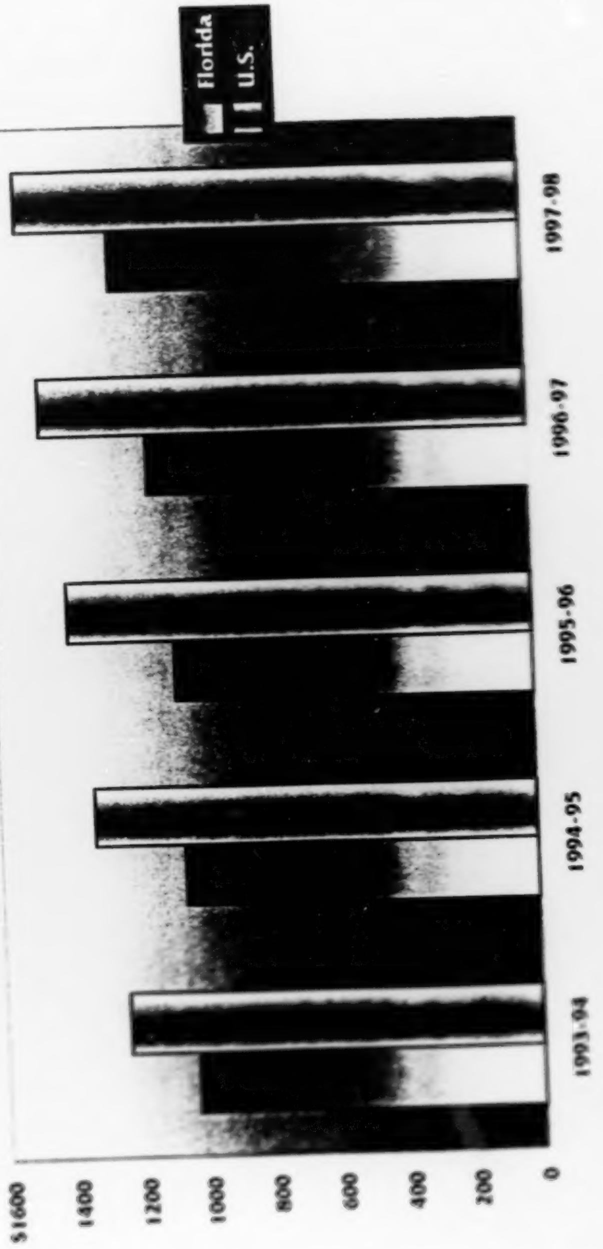
	1987-88	% Total	1996-97	% Total	Ten-Year Increase
Total All Funds	$8,629,867,335		$15,573,873,306		+80%
Education - Total	$5,115,094,130	59%	$8,127,929,323	52%	+59%
Universities	$866,929,663	10%	$1,292,058,198	8%	+49%
Community Colleges	$421,527,360	5%	$596,260,000	4%	+41%
SUS and CC	$1,288,457,023	15%	$1,888,318,198	12%	+47%

Source: Florida's Final Budget Report and Ten-Year Summary of Appropriations Data 1987-88 through 1996-97, Volume 19
Office of Planning and Budgeting, Governor's Office

Note: All funds are displayed, i.e., General Revenue, Lottery, and all other Trust Funds, including Federal Flow Through and PECO.

Exhibit 121

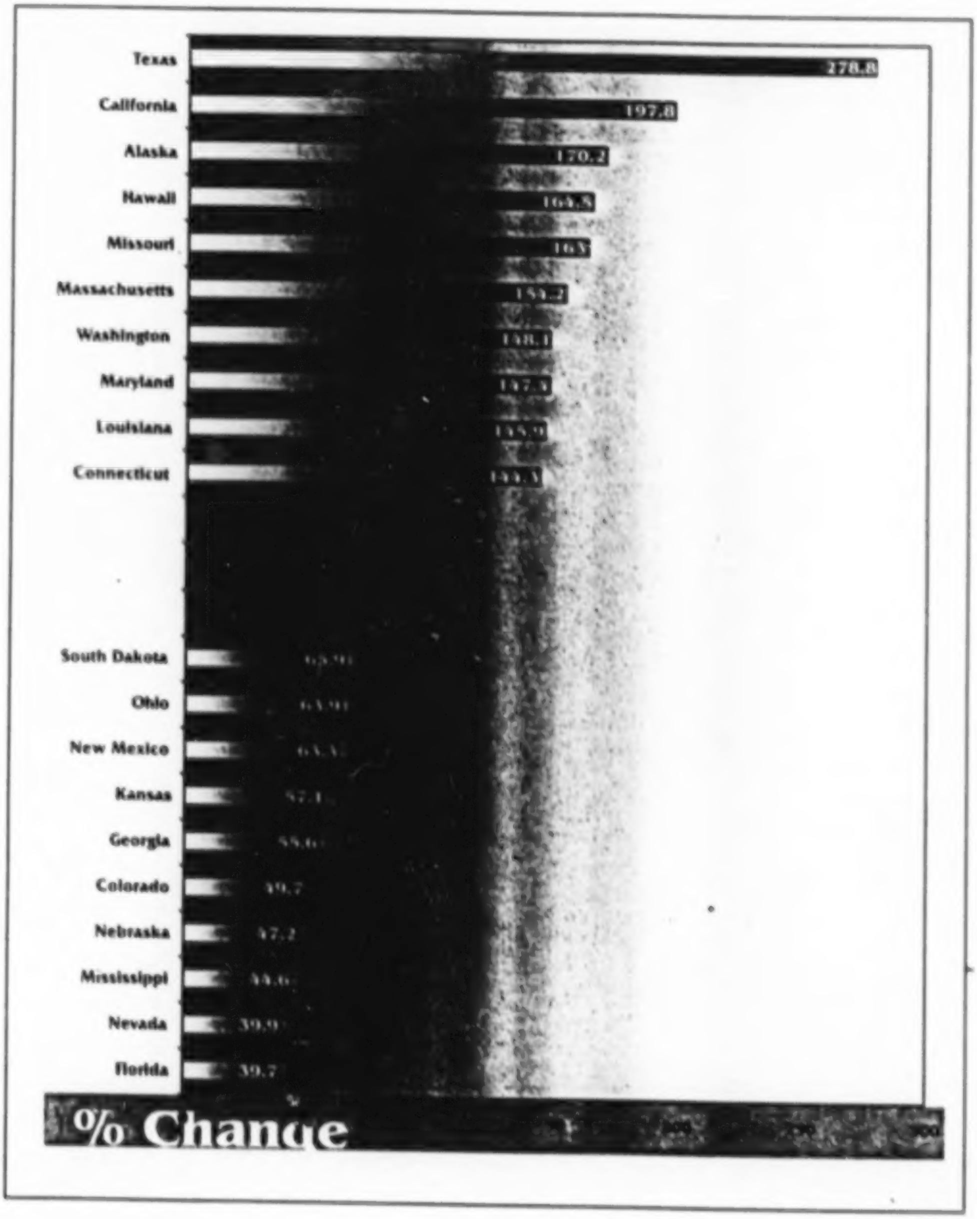
Community College Student Fees
Florida Compared to National Average
Percent of National Average



Source: Washington State Higher Education Coordinating Board, January 1998.

Exhibit 5-4

Change in Major State University Tuition and Fees FY 1981 to FY 1997



Source: Postsecondary Education OPPORTUNITY, Number 57, March 1997

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Exhibit

Need-Based vs. Merit-Based Student Aid Programs 1998-1999 Budget Request (Reflecting 1997-98 Appropriation)

Need-Based Programs

	1997-1998 Appropriation	Commissioner's 1998-1999 Budget Request
Public Student Assistance Grant	$22,153,354	$30,534,336
Private Student Assistance Grant	9,567,477	11,758,000
Postsecondary Student Assistance Grant	1,621,813	1,735,300
Seminole/Miccosukee Indian Scholarships	61,040	61,040
Jose Marti Scholarship	250,000	250,000
Mary McLeod Bethune Scholarship	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
Rosewood Scholarship	100,000	100,000
[illegible]	[illegible]	10,000,000
Subtotal	[illegible]	[illegible]
Plus Merit Aid to Needy Students	$9,000,000	$12,624,762
Total	$49,076,255	[illegible]
Percentage	42.6%	51.0%

Merit-Based Program

	1997-1998 Appropriation	Commissioner's 1998-1999 Budget Request
Bright Future Scholarships	$75,000,000	$100,998,097
Subtotal	$75,000,000	$100,998,097
Less Merit Aid to Needy Students*	($9,000,000)	($12,624,762)
	$66,000,000	$88,373,335
	57.4%	49.9%

Source: Florida Department of Education.

*Estimated 12.5% of Bright Future Students for 1998-99 will also be students with a calculated student financial need (1997-98 estimate was 12.0%).

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Exhibit

State University System of Florida, State-Required Fees, 1974-1996

		Matriculation	Building & Capital Improvement	Financial Aid	Total State Fee	Matriculation Increase	Total State Fee Increase
Quarter Hours	1974				$13.00		11.54%
	1975				$14.50		8.62%
	1976				$15.75		0.00%
	1977				$15.75		0.00%
	1978				$15.75		0.00%
	1979				$15.75		0.00%
	1980				$15.75		0.00%
Semester Hours	1981	$14.14	$3.76	$1.06	$18.96		
	1982	$16.14	$3.76	$1.06	$20.96	14.14%	10.55%
	1983	$16.14	$3.76	$1.16	$21.06	0.00%	0.48%
	1984	$18.14	$3.76	$0.91	$22.81	12.39%	8.31%
	1985	$19.05	$3.76	$0.95	$23.76	5.02%	4.16%
	1986	$20.57	$3.76	$1.03	$25.36	7.98%	6.73%
	1987	$23.11	$3.76	$1.16	$28.03	12.35%	10.53%
	1988	$23.11	$4.76	$1.16	$29.03	0.00%	3.57%
Increase before Prepaid[1]		7.270%	3.426%	1.296%	6.275%	7.270%	6.275%
Prepaid Implemented	1988	$23.11	$4.76	$1.16	$29.03	0.00%	0.00%
	1989	$25.42	$4.76	$1.27	$31.45	10.00%	8.34%
	1990	$27.96	$4.76	$1.40	$34.12	9.99%	8.49%
	1991	$32.15	$4.76	$1.60	$38.51	14.99%	12.87%
	1992	$36.97	$4.76	$1.84	$43.57	14.99%	13.14%
	1993	$38.08	$4.76	$1.90	$44.74	3.00%	2.69%
	1994	$38.08	$4.76	$1.90	$44.74	0.00%	0.00%
	1995	$38.08	$4.76	$1.90	$44.74	0.00%	0.00%
	1996	$43.92	$4.76	$2.19	$50.87	8.58%	7.68%
Increase after Prepaid[1]		7.395%	0.000%	7.316%	6.431%	7.395%	6.431%
Increase 1981-1996[1]		7.340%	1.485%	4.640%	6.363%	7.340%	6.363%

[1] Percentage figures are compound annual percentage increase.

Note: The State University System converted from quarters to semesters in 1981. Since semesters are longer than quarters, the fee increases associated with the conversion are higher than normal. Consequently, the quarter hour fees are presented for information purposes only.

Sources: State University System, Florida Prepaid Tuition Program.